



September 2,2020

TO: Mark Mitchell, Interim City Manager

FROM: Dan Scherer, Local Manager (Alliance Water Resources)

RE: **Emergency Repair Request**

Water Treatment Plant (WTP) #2 High Pressure-Pump 200 HP Motor Rebuild

On September 1, 2020 during a normal water production cycle the # 2 High-Pressure pump was started, after about 30 minutes of run time the on-shift operator noted a smoky haze in the RO room and investigated. He also noted the smell of burnt electrical components in the room. He immediately shut down the #2 High-Pressure Pump and started the #1 High-Pressure Pump to continue the production cycle. The following morning WTP staff performed a visual inspection of the #2 pump and noted specks of molten metal and pieces of wire insulation on the exterior of the motor. Staff also performed an electrical insulation test on the motor and found the motor to be bad. Run time on the motor is estimated to be 32,000+ hours. The High-Pressure Pumps are a crucial part of the water production cycle and without them the facility cannot produce water.

Quotations as follows:

Independent Electric	-----	\$6,892.50
Evans Enterprises	-----	\$8,665.00
JCI Enterprises	-----	\$8,863.00

At this time, I am requesting approval to allow the low bidder, Independent Electric to rebuild High Pressure Pump motor #2 in the amount of \$6,892.50. This repair is not a budgeted item and will be expensed from the WTP repair account # 500-5-4425-232. For references purposes a new replacement motor would cost \$23,448.00.

If you have any questions, please contact me.

Cc: Shawn Middendorf, file

COMPETITIVE ANALYSIS

BIDDER NO 1: Independent Electric

CONTACT: Brian Coble

PHONE NO: 417-865-1626 FAX NO: 417-865-5313

QTY.	UNIT	DESCRIPTION	PRICE
<u>1</u>	<u>_____</u>	<u>High Pressure Pump Motor #2, Rebuild</u>	<u>\$6,892.50</u>
<u>_____</u>	<u>_____</u>	<u>Unit, bearings, rewind, balance,</u>	<u>_____</u>

* Lowest quote + great service

BIDDER NO 2: JCI Industries, Inc.

CONTACT: Mark Swendrowski

PHONE NO: 816-803-9607 FAX NO: _____

QTY.	UNIT	DESCRIPTION	PRICE
<u>1</u>	<u>_____</u>	<u>High Pressure Pump Motor #2, Rebuild</u>	<u>\$8,863.00</u>
<u>_____</u>	<u>_____</u>	<u>unit, bearings, rewind, balance,</u>	<u>_____</u>

BIDDER NO 3: Evan's Enterprises

CONTACT: _____

PHONE NO: 417-886-8886 FAX NO: 417-886-8882

QTY.	UNIT	DESCRIPTION	PRICE
<u>1</u>	<u>_____</u>	<u>High Pressure Pump Motor #2, Rebuild</u>	<u>\$8,665.00</u>
<u>_____</u>	<u>_____</u>	<u>unit, bearings, rewind, balance,</u>	<u>_____</u>

SPECIFY SHIPPING: UPS _____ WILL CALL _____ VENDOR TRUCK _____
COMMON CARRIER _____ OTHER _____

WHO PAYS SHIPPING: PREPAID _____ COLLECT _____ (no COD allowed)

PAYMENT TERMS: NET 30 DAYS _____ 1% TEN DAYS NET 30 _____
CHECK WITH ORDER _____ OTHER _____

PROMISED SHIP DATE: Rebuild, Approx 1 to 2 weeks

PREPARED BY: Joseph D. Tipper DATE: 9-2-2020

* Note: Does not include machine work.



Springfield Division

Remit to: Independent Electric
4425 Oliver Street
Kansas City, KS 66106

Ship to: Independent Electric
1640 East Trafficway
Springfield, MO 65802

Office/Sales:
Ph: 417.865.1626
Fx: 417.865.5313
www.lemco.com

Attn Joe Tipper	cc
Phone: (417) 448-2700 x	Fax: (417) 448-2707 x

Quote

Quote Number SP-RRE2460
Job Number SP-R3231

Customer Information

NEVADA, CITY OF
110 S ASH ST
NEVADA, MO 64772

Ship To Information

NEVADA, CITY OF
110 S ASH ST
NEVADA, MO 64772

Quote Date:	9/2/2020
Customer ID:	121307
Quoted By:	Brian Coble
RFQ #:	
Salesperson:	
Terms:	NET 30

Nameplate Information

ID	SP-M3287
Motor-Make	US Motors
Motor-Model	5KS6287XH4000A
Motor-Serial #	AXJ118123
Rating	200
HP Unit	HP
RPM	1785

Ship Via:

Frame	6287P20
Enclosure	VERT
Poles	4
Rated V.	460
Rated A.	218
# of Phases	3
Frequency (Hz)	60

Quote Information

Reason For Work: Dismantle unit, check and record all mechanical fits, test unit for electrical integrity, rewind stator, balance rotor, replace bearings, assemble, test and paint unit

Cause of Failure:

Required Work: MAJOR AC MOTOR REPAIR: DISMANTLE, CLEAN, AND INSPECT. ELECTRICALLY TEST WINDINGS. (GROUNDED / SHORTED) REWIND, DIP AND BAKE STATOR. HYPOT AND SURGE TEST STATOR WINDINGS. MIC AND RECORD ALL MECHANICAL FITS. DYNAMICALLY BALANCE ALL ROTATING PARTS. INSTALL NEW BEARINGS. ASSEMBLE, TEST RUN AND RECORD ALL DATA. PAINT AND COMPLETE.

Comments: MOTOR WILL COME WITH A 24 MONTH WARRANTY FROM DATE OF DELIVERY. DOESN'T INCLUDE MACHINE WORK OR ANYTHING NOT NOTED. PICK UP AND DELIVERY IS FREE OF CHARGE

	Pick Up On	Lead Time	Total Price
Work Based on Straight Time:			\$6,892.50

Quotes Do Not Include Sales Tax or Freight, Unless Otherwise Noted.
We Are not Responsible For Items Left Over 90 Days.
Quote is valid for 30 days.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **PO# (if not yet issued)** 10071



Springfield Division

Remit to: Independent Electric
 4425 Oliver Street
 Kansas City, KS 66106

Ship to: Independent Electric
 1640 East Trafficway
 Springfield, MO 65802

Office/Sales:
 Ph: 417.865.1626
 Fx: 417.865.5313
 www.lemco.com

Attn: Joe Tipper	cc:
Phone: (417) 448-2700 x	Fax: (417) 448-2707 x

Quote

Quote Number SP-PRE1080
Job Number SP-P1166

Customer Information

NEVADA, CITY OF
 110 S ASH ST
 NEVADA, MO 64772

Ship To Information

NEVADA, CITY OF
 110 S ASH ST
 NEVADA, MO 64772

Quote Date:	9/2/2020
Customer ID:	121307
Quoted By:	Brian Coble
RFQ #:	
Salesperson:	
Terms:	NET 30

Nameplate Information

Ship Via:

Quote Information

Reason For Work:	SERVICE CALL TO REMOVE AND REINSTALL PUMP ON 200HP MOTOR, 1 DAY TO REMOVE AND 1 DAY TO REINSTALL.
Cause of Failure:	
Required Work:	
Comments:	

	Pick Up On	Lead Time	Total Price
Work Based on Straight Time:			\$1,600.00

**Quotes Do Not Include Sales Tax or Freight, Unless Otherwise Noted.
 We Are not Responsible For Items Left Over 90 Days.
 Quote is valid for 30 days.**

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **PO# (If not yet issued)** 10071



JCI Industries, Inc.
2301 W. 20th Street
Joplin, MO 64804
Tel: 417-623-4544

www.jciind.com

Thursday, September 3, 2020

Nevada MO, City of
City Hall
110 S Ash
Nevada, MO 64772

Phone: 417-448-2761
Fax: 417-448-2707

Attention: Joe Tipper

Subject: GE 200HP, 4-pole, 460V 6287P20 Frame Motor Rebuild

Quotation #: 0747065383MFL
Please refer to this number when ordering

Joe Tipper:

JCI Industries, Inc. would like to thank you for the opportunity to provide a proposal on the above referenced service. We appreciate the opportunity to provide our equipment and services. Please contact us if you have any questions regarding this offering.

Best regards,

Matt Fortsch
Customer Service
JCI Industries, Inc.

Mark Swendrowski
Sales Engineer
JCI Industries, Inc.
816-803-9607



JCI Industries, Inc.
2301 W. 20th Street
Joplin, MO 64804
Tel: 417-623-4544

www.jciind.com

Thursday, September 3, 2020

Quote #: 0747065383MFL

Item	Description	Qty	Unit Price
1.00	GE 200HP Motor Rebuild The following work will be completed: Visually inspect motor components upon arrival Check for damaged leads Meg winding for resistance measurement Disassemble motor Clean all parts Core test, bake stator, and remove old winding Core test, rewind, dip, and bake stator Surge test winding Balance rotor Install new bearings One thrust bearing and one ball guided bearing Assemble motor complete Test run Paint and Prepare for transport - Any additional repairs required will be quoted after inspection	1	\$8,863.00
2.00	Removal and Install of Motor Scope Of Work 2 Field service techs on site to pull the motor JCI will transport motor back to our shop Upon completion of repair JCI will transport motor back to site 2 Field service techs to install repaired motor	1	\$2,900.00

Total **\$11,763.00**

Terms & Conditions	
Lead Time 3 Weeks After Receiving Order	Payment Terms Net 30
Shipping Method Best Way	Shipping Terms Included in Quote
F.O.B. Warehouse	This Quotation is valid for 30 days.

Evans Enterprises, Inc.

4647 W. Junction Street
 Springfield, MO 65802
 (417) 886-8886 Phone
 (417) 886-8882 Fax



NO: 00021129
 DATE: 9/2/2020
 PAGE 2

Contact **JOE TIPPER**

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CITY OF NEVADA
 110 SOUTH ASH ST
 NEVADA, MO 64772

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CITY OF NEVADA
 110 SOUTH ASH ST
 NEVADA, MO 64772

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Test run motor at rated voltage, measure and record No Load amps, RPM and compare to nameplate. Record results. Perform horizontal, vertical and axial vibration analysis on O.D.E and D.E. of motor during test run. Record results. Measure and record winding temperature (RTD's) and bearing temperatures (BTD's). Record results. Scribe magnetic center if applicable.

Paint and Prepare for Shipping:

Install all parts and accessories referring to match marks and photos to assure proper positioning. Drain oil if unit is oil lubricated and install "Fill with Oil" tags. Mask and prepare unit for painting and paint. Install Mechanics Tag with bearing numbers and type included. Block shaft if required and prepare unit for shipping. Review and finalize all test results.

Freight: Unit will be transported on an Evans truck suitable for the load by an Evans driver that has been trained on the proper techniques of loading, securing and transporting electrical apparatus.

Warranty: One year on random wound and two years on form wound material and workmanship.

Additional Comments:

MACHINE WORK IS NOT INCLUDED	1.00	8,665.00	8,665.00
Lead Time:			
14 - 21 BUSINESS DAYS ARO	1.00	0.00	0.00
4004			
Service Call			
LABOR TO REMOVE AND INSTALL HIGH PRESSURE PUMP 2 MOTOR ONLY HOUR	1.00	3,200.00	3,200.00
FUEL MILEAGE			
	1.00	240.00	240.00
LEAD TIME FOR INSTALLATION			
TO BE DETERMINED UPON COMPLETION OF MOTOR REWIND	1.00	0.00	0.00
		Labor Subtotal	3,200.00
		Other Subtotal	8,905.00
		TOTAL	12,105.00

Valid for 30 calendar days from the above date

Total does not include sales tax and will be applied on the final invoice if applicable. Payment terms Net 30 days for account holders unless otherwise specified.

If additional work, parts, services or materials are required that are not specifically included in the above work scope an "Extra Work Authorization" will be required. This proposal does not include third party inspection, licensing and/ or certification.

Based upon our Standard Terms and Conditions available at www.GoEvans.com/terms



Received By: _____

Date: _____

Thank you for your interest and consideration!

Evans Enterprises, Inc.

4647 W. Junction Street
Springfield, MO 65802
(417) 886-8886 Phone
(417) 886-8882 Fax



NO: 00021129
DATE: 9/2/2020
PAGE 1

Contact **JOE TIPPER**

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CITY OF NEVADA
110 SOUTH ASH ST
NEVADA, MO 64772

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CITY OF NEVADA
110 SOUTH ASH ST
NEVADA, MO 64772

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NAMEPLATE DATA

Manufacturer:GE; ID #:-; Frame:6287P20; Model #:5KS6287XH4000A; Enclosure:WPI; Serial #:AXJ118123; HP:200; RPM:1785; Volts:460; Amps:218; Type:KS; Cycles:60; Phase:3; Code:G; Temp Rise:40; Service Factor:1.15; Insulation Class:F; Color:GREY; UL Class:-; UL Group:-; Current UL#:-; New UL#:-

SPECIAL INSTRUCTIONS

HIGH PRESSURE PUMP 2 MOTOR ONLY

	UNIT	QTY	UNIT PRICE	EXTENSION
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We are pleased to provide the following work scope and quotation for your consideration:

Large AC Motor Stator Rewind Process to Include:

Incoming Inspection and Disassembly:

Receive motor, perform incoming visual inspection, note any missing or broken parts, note any accessories attached to the unit when received, record full nameplate data including Serial # and complete incoming section of Repair Order. Take photos of special conditions, accessories and their positions. Perform Meg test on stator windings as received. Record incoming readings. Match mark ALL components that could be removed during disassembly process. Disassemble unit completely identifying major components and parts pans with R.O. #. Perform internal visual inspection of all components note any obvious signs of wear, contamination, heating or other damage.

Rotor:

Clean and bake rotor to remove moisture. Paint all non-critical fit surfaces with red insulating sealer. Measure all critical mechanical fits on rotor (i.e. bearing journals, bearing housings, seal surfaces, shaft extension, keyway, etc.) and record results. Measure and record rotor TIR (Total Indicated Run out) readings. Dynamically balance rotor to standards based on operating speed. Perform high current squirrel cage test, identify hot spots with Infrared Gun, mark broken bars, solder connections or porosity with permanent marker. If rotor damage is identified, notify customer immediately with findings and an "Extra Work Authorization" will be requested before proceeding with repairs. Lightly polish shaft extension and apply light coat of protectant.

Parts and Accessories:

Clean and dry all accessories (e.g. space heaters, oilers, oil system plumbing, encoders, winding RTDs, bearing RTDs, overloads, water cooled bearing systems, etc.) to remove moisture. Test / measure all accessories to assure proper operation. Note any non-functioning accessories and provide "Extra Work Authorization" request to customer for repair or replacement of faulty components. Replace or Repair both bearings as needed.

Stator Rewinding:

Perform "Before Roasting" Core Loss test on stator winding & record results. If core loss test proves damaged stator core iron contact customer & quote restack or replacement of motor. If core loss test results are good, remove opposite connection end of winding coils & roast windings in temperature controlled, water suppressed oven. After stator is cooled, dissect connection & winding to determine & record "As Received" winding & connection data. Measure & record stator iron, tooth, slot, etc. data. Record ALL data on winding data card. If winding data is suspect, process winding data through EASA stator rewind software to confirm that the winding is correct based on standard winding design. Remove windings, blast and prepare core for winding. Repair any minor damage to laminations, teeth or stacking plates. Perform "After Roasting" Core Loss test on stator winding and record results. If core loss test proves damaged stator core iron, contact customer and quote restack or replacement of motor. Manufacture new copper coils based on winding data retrieved during winding removal process. Install new copper coils in stator slots using winding data card for proper span and coil configuration. Connect, solder and insulate coils per winding data retrieved during winding removal process. Secure and brace coil end turns as needed to assure rigid end turns and minimize movement. Prepare and mask critical fit surfaces for varnish encapsulation process. Perform Meg, DC Hipot, and Surge comparison tests when winding process is completed before varnish encapsulation process. Record Results. Varnish encapsulate and cure stator and clean excess resin ready for assembly.

Final Assembly, Test and Test Run:

Assemble unit complete referencing match marks and photos to assure as found assembly. Perform all final electrical tests after assembly prior to test run.