

B&B BENCHMARK

B&B ELECTRIC MOTOR CO. WICHITA, KS



HAPPY HOLIDAYS



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WHAT'S NEW AT B&B



REWIND

Although most of the rewind process is done by hand, there are pieces of equipment that are a very important part of rewinding a motor.

B&B has three winding machines, a core loss tester, a surge tester, and a temperature controlled heat process oven. We rewind all motors with inverter duty wire.



WHO'S WHO AT B&B

"In the spotlight" this issue is supervisor of our rewind department; Kevin Kralicek. Kevin has been with B&B Electric Motor Co. for 18 years and has been winding motors for over 30 years.

Kevin is married with two teenage children. He builds model rockets in his spare time (if you can have spare time with teenagers) and likes to work on old cars.

WHAT CAN WE DO FOR YOU?

One of the many services B&B provides is the **rewinding** of electrical motors. This includes both A.C. and D.C. motors in horse powers ranging from special fractional motors to horse powers in the thousands.

Simply put, rewinding is the process of replacing the winding and insulation in a motor.

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**Reliable
Solutions
Today!**

TECHNICIAN'S CORNER

SHOULD I REPAIR OR REPLACE MY ELECTRIC MOTOR?

When a motor fails, many decisions have to be made before the final repairs can be performed. First you must consider if the motor is suited for its application. If it is, then you need to determine the damage done to the motor both electrically and mechanically. If you have had a catastrophic failure it would likely be less expensive to replace then repair. Many electric motors are specially designed for a particular application and can only be obtained from the manufacturer of the original equipment. In this case you must determine "do I want repair or replace?" The time it takes to obtain a new motor from the OEM might be a determining factor whether to repair or replace the motor. The repair might be the best way to proceed, even if it means paying more, to shorten your down time of equipment. Not all electric motor shops can perform the necessary repairs when there is a catastrophic failure.

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REWINDING...CONTINUED

A motor is first **surge tested** to determine the condition of the winding. We also use a **core tester** to check the integrity of the laminations of the stator iron.

If the winding is found to be grounded or shorted it is disassembled and prepared for the **heat process** oven.

The **heat process** oven utilizes a precise temperature control which enables us to control the temperature of the stator iron. It is a radiant heat (as opposed to fire) that carbonizes the insulation material

on the winding to ease removal of the winding. Once out of the oven, the iron is once again checked to prove the integrity of the laminations, to see that there has not been a change.

The coils are then examined to determine the winding specifications and then they are removed. The iron is **pressured washed** and then placed in the **dryout oven**. When it cools, the **slot insulation** is installed, preparing for the insertion of the new coil windings.

With 3 **winding machines** and 6 different **winding heads** we are able to prepare coils in a variety of sizes and shapes. Coils are

REWINDING.....CONTINUED

wound with **inverter duty wire**, using the specifications from the old winding. Because inverter duty wire has a higher quality of insulation, it operates better in **higher temperature and inverter** applications. It's a good choice when dealing with frequency converters and other electronic controls.

The **wound coils** are then manually inserted in the insulated slots and shaped. The connections are welded together and the lead wires are welded on and insulated. At this point the coils will be formed and laced up by hand.

The stator is then returned to the **curing** oven to pre-heat. We dip it in a class H solvent less **varnish** and the stator then goes to the oven to cure the varnish.

The stator is then tested one last time using the surge tester to check the integrity of the winding. After assembly, the motor is then tested and returned to our customer for dependable service.

B&B Electric Motor Co. takes pride in delivering a quality finished product.

REPAIR OR REPLACE...CONTINUED

A catastrophic failure would be when the motor has damage to the windings, stator core iron, end bells, bearing surfaces, bearing clamps, rotor, stator shell, and any other electrical or mechanical parts. At B&B Electric Motor Co. we have the experienced personnel and the equipment to make the necessary repairs, and/or to modify a new motor to meet your special needs.

When replacing a motor there is certain information needed before calling our Service Center:

- What is the basic nameplate information? (Manufacture, horsepower, speed, voltage, phase, frame size, catalog number, model number, enclosure—open drip proof, totally enclosed air over, totally enclosed fan cooled—, rigid base, resilient base, C or D face mounting).
- What does the motor operate? (A fan, blower, pump, conveyor, gearbox, etc).
- How does the motor drive the load? (V-belts, coupler, into a gearbox, etc).
- Is there auxiliary equipment attached to the motor? (Clutches, gearbox, brake, pump, etc).
- Why do you think the motor needs repairs? (Is it noisy, did it smoke, does it even run, does it need preventive maintenance)?
- What is the motor's past running history? (Is it a problem motor)?

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The employees of
B&B Electric
Motor Co.

*Would like to wish you and
yours a very happy, healthy*
HOLIDAY SEASON!



**B&B ELECTRIC
MOTOR CO**

332 LULU WICHITA, KS

**24 HOUR
EMERGENCY
SERVICE**

CALL

OFFICE 316-267-1238

CELL 316-641-0806

316-721-4178

316-529-4692

316-529-8503

OUTSIDE WICHITA
(TOLL FREE)

800-499-1238

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Visit our WEB SITE at
bbelectricmotor.com



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REPAIR OR REPLACE...CONTINUED

- How is the motor started?
(Manual switch, across the line motor starter, soft starter, adjustable speed drive, part winding start, WYE start or delta run, etc).
- What is the operating environment? (Indoors, outdoors, dusty/dirty, moist, subject to hazardous fumes, etc).
- When do you need the motor back? Will you authorize overtime, air freight for a motor and/or parts?
- Is the motor still under factory warranty? If so, you will need to supply the Service Center with the purchase date of the motor (or equipment the motor is from) and the failure date. Proof of purchase may be required to obtain factory warranty.

Today, many motors are replaced with higher efficiency motors helping you to conserve electricity, improve your power factor and lower your utility costs. B&B Electric Motor Co. can supply you with quality replacement motors of high efficiency and improved power factor from our stock of fractional to 100 horsepower motors. We can supply larger horsepower and high voltage motors from the top manufactures of the world.

We represent A.O. Smith, Baldor, Bell & Gossett, Century/Magnetek, General Electric Lafert, Leeson, TECO-Westinghouse, and Universal. We carry only the best quality motors to serve our customer's needs. If you need more information about understanding electric motors, we can supply you with some booklets from our manufacturers.

B&B ELECTRIC MOTOR CO
332 LULU
WICHITA, KS 67211



Mission Statement

B&B ELECTRIC MOTOR CO. is committed to the high standards established by the Electrical Apparatus Service Association. Our pledge is to maintain these standards and to provide the quality workmanship and service to our customers which has earned us an excellent reputation in over thirty-four years of business. We continually provide the newest technology and quality products to meet the needs of our customers. Our staff of dedicated professionals provides the best quality workmanship and service, and are the cornerstone of our business.