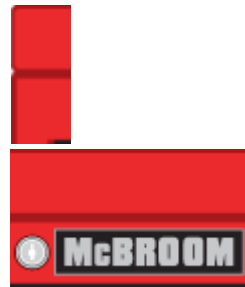




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Servo Motor Repair

Precision Spindle Repair

AC/DC Motor Repair



Machining Services



Electrical Product Sales



Fluidguard™



Platinum Insulation Process



It's about commitment...

TO QUALITY

We provide the tools you need to keep your business humming. Our company has grown with the needs of our customers and whether you require the services of one of our departments or several, one thing remains the same — our commitment to quality. We're very proud to be ISO 9001:2000 certified — and our quality processes and workmanship show in all our work.

TO PEOPLE

We're committed to building relationships. It shows in the way our employees take pride in the work they do and the way our customers count on McBroom year after year.

TO CONVENIENCE

Our goal is to make doing business convenient for you. We want to be your value-added partner. We have built our business on offering custom solutions for our customers, and we'd like to do the same for you. We've been doing it since 1932.

We're committed to giving you the tools you need to grow your business.

*Please call our
Customer Service Department
with any questions!
800-873-7330*



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Indianapolis, IN 46202

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Servo Motor Repair



- McBroom's commitment to providing our customers the highest quality service includes state-of-the-art OEM test units in our lab. Quick, accurate analysis to the component level allows us to repair motors to nameplate specifications and return to our customer meeting or exceeding all of the manufacturer's specifications.
- Our complete in-house repair capabilities include machining, balancing, rewinding and re-magnetizing. These in-house repair advantages allow us to have complete control of turn-around time on all repairs.



Incoming Servo Motors

- Meg and HiPot windings
- Mechanically run unit opposite rotation and record output signal of control device

After Repair

- Utilizing Mitchell testing equipment (designed to conform proper calibration of encoder or resolve output signal), ensure output signal is correct and meets manufacturer's specifications
- Physically connect motor to drive in test cell and run unit with drive connected to simulate same duty cycle as seen on shop floor
- Run unit and generate vibration spectrum and Failure Analysis Report



Why use McBroom for your servo motor repairs?

- Increased machine uptime
- Greatly reduced turn-around time
- Design enhancements increase your repair cost savings

Brands Serviced Include...

ABB	AEG	ALLEN BRADLEY
AMETEK	AMK	BAUMUELLER
BAUTZ	BBC	BERGER LAHR
BEWEGUNGSTECHNIK AG	BODINE	BUSCH
CEM	CINCINNATI MILICRON	CMC
CONTRAVES	CONTROL TECHNIQUES	CUSTOM SERVO MOTOR
DENSO	DUNKERMOTOREN	DUPLOMATIC
ELAN AG	ELMO	EMERSON
EXLAR	FANUC	FLENDER HIMMEL
GE FANUC	GENERAL NUMERIC	GEORGII KOBOLD
GETTYS	GIDDING & LEWIS	GOULD
GROSCHOFF	HAUSER	INDRAMAT
INDUSTRIAL DRIVE	KOLLMORGEN	KUKA
LENZE	MAGNETEK	MAVILOR
MOOG	MTS	OKUMA
OMRON	ORMEL	PAC SI
PAHASE	PANASONIC	PARAVEX/ABB
PARKER	PEERLESS WINSMITH	PERSKE
POWERTECH	POWERTRON	RELIANCE/ELECTROCRAFT
SANGALLI	SEM	SIEMENS
SIGMA	STROMMAG	SUMITOMO
SUPERIOR	SEW	TOSHIBA
UNICO	VICKERS	WHEDCO



Encoders We Repair

HEINDENHAIN	HENGSTLER	MITSUBISHI
SANYO DENKI	SUMTAK	TAMAGAWA
YASKAWA		



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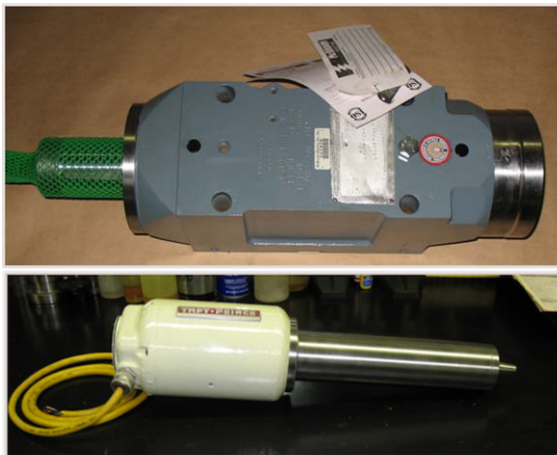
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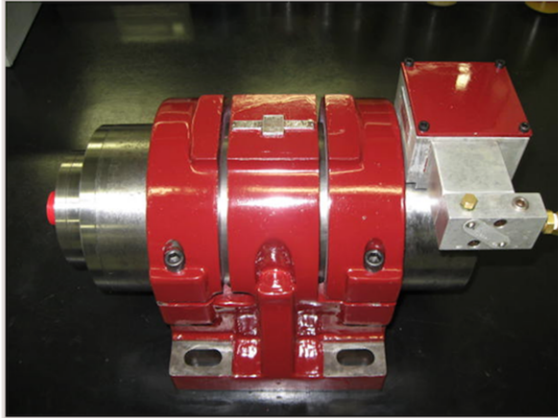
Precision Spindle Repair

McBroom specializes in the rebuild of all types of spindles, equal to or better than the manufacturer's specifications.

- In-depth inspection and analysis
- Written repair quotation
- Obsolete part manufacturing
- Precision surface regrinding
- Stator rewinding
- Worn component replacement
- Precision balancing



- We will arrange to have your spindle delivered to our facility where it will be disassembled, inspected and evaluated. After evaluation a detailed quote will be sent to you for your approval.
- All parts will be meticulously examined for proper fit and geometry using the latest measuring equipment. All critical dimensions are returned to print specifications or better to ensure trouble-free operation.
- Every spindle shaft is dynamically balanced with computerized equipment to some of the tightest tolerances in the industry.
- McBroom will work with your manufacturing engineers to make spindle modifications such as special sleeving, stator insulation, modifications to accept sealed bearings, slingers or special oiling requirements.



- Our fully-equipped spindle repair facility specializes in the repair of precision, high speed, high frequency and belt driven spindles, servicing the automotive, machine tool and aerospace industries.
- McBroom can improve your capabilities and productivity and lower your maintenance costs. Our skilled technicians will provide quality repairs promptly and accurately with complete diagnostic documentation.



Why use McBroom for your spindle repairs?

- Increased machine uptime
- Greatly reduced turnaround time
- Design enhancements decrease your repair costs



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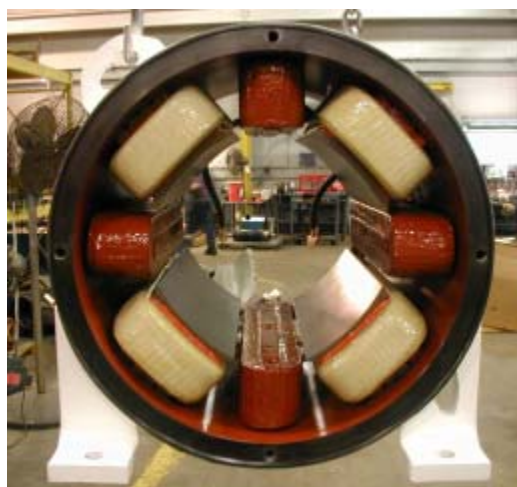
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AC/DC Motor Repair

Services include...

- AC MOTORS
- DC MOTORS
- SPECIALTY MOTORS
- GEAR BOX REPAIR
- PUMP REBUILDING
- COMPLETE AC/DC REWINDING
- ELECTRICAL & MECHANICAL SERVICES
- FULL SERVICE MACHINE SHOP
- TRANSFORMER REBUILDING
- PRECISION BALANCING
- VIBRATION ANALYSIS



- AC Motors to 2500 hp
- DC Motors to 1500 hp
- 24 Hours/Day, 7 Days/Week Service



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Machining Services

Full Service

- Large Diameter Turning
- Horizontal & Vertical Boring & Milling
- Hydraulic Pressing
- Dynamic Balancing & Dynamometer Testing
- Reverse Engineering for Obsolete Parts
- MIG/TIG & Arc Welding - aluminum, stainless steel and all exotic metals
- New shaft manufacturing
- Stub shafts



Mechanical Repairs

- Fans
- Gearboxes
- Pumps & Compressors
- Electrical & Mechanical Spindle Motors
- AC/DC Electric & Servo Motors
- AC/DC Variable Speed Drives



Metal Coating Services

- Wear-Resistant Coatings
- Nickel Chromium Metallizing
- Ceramic Coatings
- Corrosion-resistant Coatings
- Prototype & Custom Machining
- Unsurpassed Quality & Service

- Multi-Resource, Solution Oriented Staff
- Pick-Up & Delivery
- Fast Turnaround, Guaranteed Quality
- 24/7 Service - 365 Days/Year



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Electrical Product Sales

McBroom is a distributor and authorized repair center for



McBroom is a strategic partner with



McBroom is an authorized distributor for



[More Information](#) | [Data Sheet](#)

AC Electric Motors

U.S. MOTORS
BALDOR
MOTORS
BODINE
DYNAMATIC
LINCOLN

EMERSON
LEESON
GENERAL ELECTRIC
DEMAG
RELIANCE

ABB
WORLDWIDE
TOSHIBA
TECO
DELCO

DC Electric Motors

EMERSON
ABB
RELIANCE
YASKAWA

U.S. MOTORS
BALDOR
MITSUBISHI

GENERAL ELECTRIC
BODINE
BBC

Servo Motors & Systems

G.E. FANUC
BALDOR
ABB
CMC
INLAND
SIEMENS
MAVILOR

EMERSON
UNICO
PEERLESS-WINSMITH
CONTRAVES
KOLLMORGEN
SEM

INDRAMAT
GETTYS
BAUMULLER
GOULD
PACIFIC SCIENTIFIC
PARVES

Brake Motors

U.S. MOTORS
REULAND
LAFERT
LINCOLN

GENERAL ELECTRIC
DEMAG
RELIANCE

BALDOR
FORCE CONTROL
DELCO

Explosion Proof Motors

U.S. MOTORS
TOSHIBA

BALDOR

GENERAL ELECTRIC

Metric/IEC Motors

U.S. MOTORS
LAFERT
SEW EURODRIVE

ABB
SIEMENS

BALDOR
BROOK HANSEN

Electric Roll Motors

SPARKS BELTING DURADRIVE

Mechanical Brakes

FORCE CONTROL
STEARNS

REULAND
DINGS

MIDWEST

AC/DC Variable Speed Drives & Controls & Soft Start

ABB
TOSHIBA
UNICO

BALDOR
DEMAG
BODINE

AC TECH
EMERSON
BENSHAW

Electric Motor Controls

ABB
GENERAL ELECTRIC
TELEMECANIQUE

EATON DYNAMATIC
CHALLENGER

FURNAS
JOSLYN CLARK

Transformers

CHALLENGER
VAN TRAN

FEDERAL PACIFIC
OREGSI

OLSUN
TOCCO

Tachometers

GENERAL ELECTRIC
HUBNER

BALDOR

SIEMENS

Pumps

GUTHRIE

GORMAN RUPP

PEERLESS

Mechanical Drives, Gear Motors, Gear Boxes

U.S. VARIDRIVES

STERLING ELECTRIC

GRANT

BALDOR

U.S. MOTORS

LEESON

SEW EURODRIVE

REEVES

EMERSON POWER TRANSMISSIONS

If a specific manufacturer is not listed, please contact us at 1-800-873-7330. Our network of strategic alliance resources can assist you in locating the equipment.



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Fluidguard™

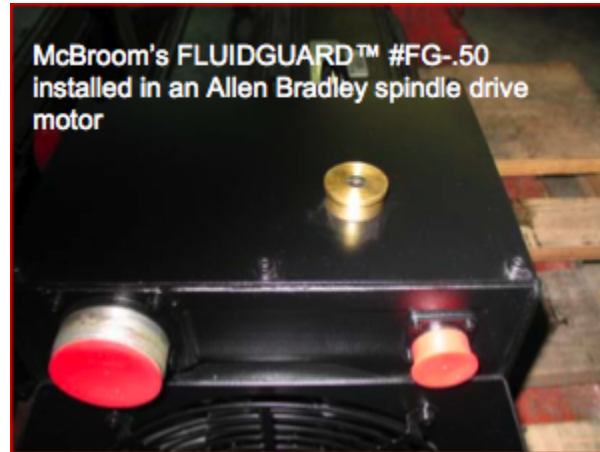
McBroom's Fluidguard™ can be used on electric or mechanical spindles, servo motors and electric motors. It allows liquids and moisture to escape from the unit without letting additional liquids and moisture enter the unit.

Fluidguard™ allows for liquids and moisture to be drained properly. This will save any type of unit from premature failure due to liquids and moisture building up inside the unit.



- Provides a safe exit of fluids from motor housing cavity
- Inhibits splash or spray entry from a hostile environment
- Can be easily adapted to any enclosure providing a ½" hole can be drilled into the housing

- Fluidguard™ installation can greatly reduce maintenance and repair costs and increase machine uptime
- Once installed the Fluidguard™ will last the life of the motor



- Can be installed in the field
- Can be retrofitted by McBroom Industrial Services
- Can be recessed when required
- Can be field serviced for any maintenance requirement
- Can be installed in any new or used asset



Remove conduit box.



Drill ½" hole in conduit box and insert the Fluidguard™



Reassemble motor.

Fluidguard™ Patent Pending

- Full service machining center
- McBroom proactively retrofits products to improve the life of the asset
- Multi-resource, solution oriented staff
- "Root Cause" focused for our customers' benefit
- 24/7 Service - 365 Days/Year
- Fast turnaround, guaranteed quality
- McBroom is experienced in recommending continuous application improvements



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Platinum Insulation Process (PIP)

Significant Motor Repair/Replacement Cost Savings

Our PIP system results in void-free coils that are likewise bonded void-free to the slot walls of the laminated steel cores they are placed in.

The thermal conductivity of the resin is on the order of 100 times better than that of air, making for greatly improved heat transfer.

The resin bonds the internal component parts of the coils into a solid mass, producing a winding that is much more resistant to coil motion.

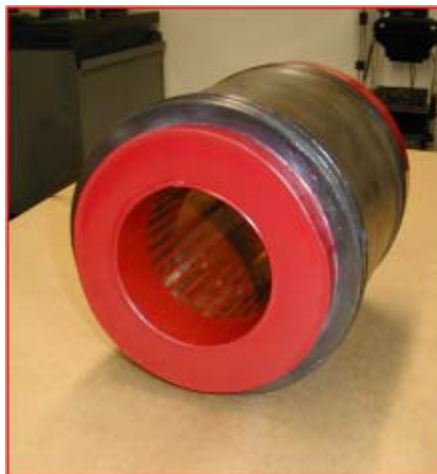
- Total protection against moisture
- Greatly improves heat transfer from coils
- Prevents vibrations & harmonics caused by variable frequency drives
- Prevents loosening and damage to windings and wires
- Prevents corrosion
- Enhances winding rigidity
- Eliminates static failures due to contamination
- Improves efficiency
- Prolongs motor life
- Reduces machine downtime



Without PIP



With PIP



Along with our PIP insulation system, McBroom also offers our patented Fluidguard™ device. It allows liquids and moisture to escape from the unit without letting additional liquids and moisture enter the unit.



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