

At United Controls our Motor Engineers and Motor Specialists perform dedication and qualification of new motors as well as testing refurbishment and repair of small, medium and large motors for use in nuclear safety and non-safety applications. Some of the steps in our process include:



- **Decontamination of Hot Motor**
- **Receipt Inspection**
- **No-Load-Run**
- **Initial Testing / Disassembly**
- **“As-Found” Dimensions**
- **Failure Analysis (if applicable)**
- **Repair Report Compiled and Sent to Customer for Approval**
- **Example Repairs: Mechanical (Machining, Replace / Dedicate Fasteners, Welds, etc.), Electrical (Leads, Replace / Dedicate New Lugs, Replace RTD’s, etc.), Stator Rewind (if applicable), Stator Re-Stack (if applicable), Component Cleaning, etc.**
- **Assembly**
- **Final Testing / No-Load-Run / Vibration Analysis**
- **Paint**
- **Shipment**



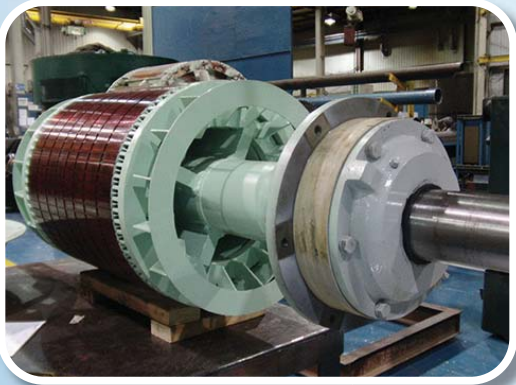
Repair:

Motor Specialists on-site with the machine will work with the partnering facilities personnel in documenting all necessary and / or recommended repairs. The repairs will be documented and specified in a Repair Plan and submitted to the customer for approval. Once the Repair Plan is approved, material will then be ordered and repairs will be completed.

Rewind:

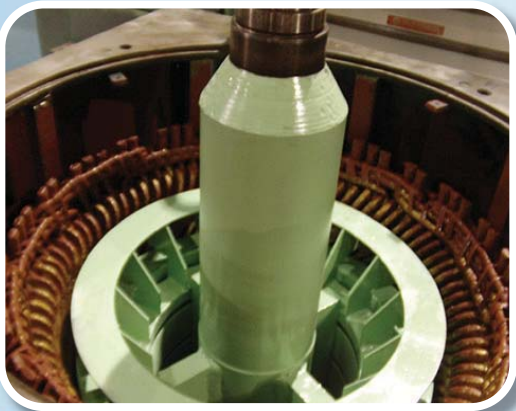
Motors should be rewound at the suggested intervals mentioned by manufacturer’s data to prevent insulation breakdown and other wear and tear issues. A motor should also be rewound depending on any potential winding repairs needed and / or hot-spots. A Data Card will be filled out with relative information concerning the machine being rewound: Frame, Amps, Horsepower, RPM, Voltage, Connection, Frame, Number of Leads, Number of Slots, Groups, Number of Coils, Coil Span, Coils per Group, Wire type, etc. The machine will undergo Vacuum Pressure Impregnation (VPI) or a Varnish Dip. These processes are used to coat and protect the windings within the stator. Testing involved with a Rewind includes: Pre / Post Burn-Out Core Loss Test, Winding Resistance, Insulation Resistance, Polarization Index, Stator RTD Resistance Checks, Surge Test, Hi-Pot, etc.





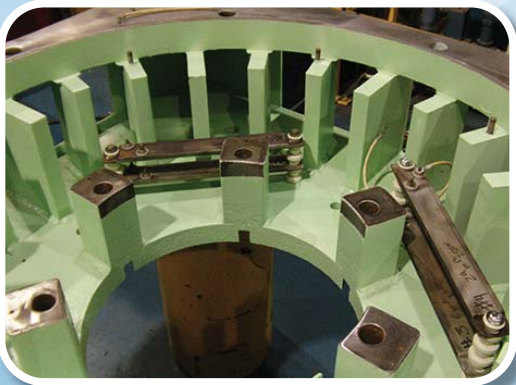
Refurbishment:

UCI Motor Specialists and partnering facilities are capable of refurbishing motors ranging from 1 – 800 horsepower. A full analysis is conducted along with a report showing what mechanisms are or could be responsible for the failure. The Refurbishment process restores the motor to performance standards in accordance with manufacturer's specifications. Older models that are no longer supported by the manufacturer can also be refurbished. All refurbishment projects utilize UCI's Quality Assurance Process and engineering documents, which aligns with our Motor Specialists' work efforts to complete critical characteristics to help meet the highest standards in the industry.



New Motor Performance Testing:

For new motors, we provide initial testing and inspection to ensure the machines operate within the manufacturer's specifications. The testing is governed by a documented dedication procedure for evaluation of the new motors, and all work is controlled by our 10CFR50 Appendix B quality program.



Material Procurement:

All items, components and / or materials purchased for: Refurbishments / Repairs / Rewinds, will have Lot / Batch traceability (if applicable), dedication performed (safety related items), uniquely identified and listed out in updated (current revisions recorded) Bill of Material (BOM). Individually dedicated materials' paperwork will be included in the overall report package.