

## *On-Site Support Services*

# PerformancePlus Annual Preventive Maintenance Programs

## Maintenance and Repair Programs for Improving the Reliability, Availability and Efficiency of Automation Technologies

PerformancePlus Annual Preventive Maintenance Programs put Rockwell Automation field support engineers at your site proactively for a scheduled number of visits throughout the year. During each visit, our engineers perform a predefined set of preventive maintenance activities (see back) to help maximize the availability, reliability and efficiency of your automation equipment and technologies including:

- Programmable Controllers
- AC and DC Drives & Motors
- Motion Control
- Medium Voltage Drives
- Related Peripheral Devices

PerformancePlus programs can also be configured to include options such as replacement parts and repair labor, as well as additional scheduled labor for other operations support services, to provide a comprehensive, single agreement that maximizes equipment uptime and provides a fixed annual equipment maintenance cost.

### **PerformancePlus Preventive Maintenance Features**

- Documentation of system specifications
- Control, electrical, and mechanical inspection of automation systems and equipment
- Drive calibration and adjustment (if applicable)
- Software program revision check, back-up and verification
- Communication integrity check
- On-the-job training for equipment operators and maintenance staff
- Priority service response for emergency repairs



- Documentation of equipment performance and maintenance process in equipment logbook
- Regular status/summary reviews of equipment performance and maintenance program, including progress against agreement goals, ROI measures and ongoing recommendations for improvement

### **Service Benefits**

- Reduce unplanned downtime and related problems
- Reduce Mean Time to Repair (MTTR)
- Increase and extend equipment life
- Fix annual maintenance costs
- Improve machine/production performance and output quality
- Identify machine problems proactively, before a breakdown occurs
- Improve internal troubleshooting capabilities and machine operator skills
- Obtain skilled resources to quickly and efficiently provide preventive maintenance on your automation systems and equipment
- Leverage the full technical resources and service capabilities of the largest company in the world singularly focused on industrial automation
- Supplement operations/maintenance staff during peak work loads or special projects
- Meet your equipment performance and production goals
- Fully protect your biggest investment – your operations

## Standard Preventive Maintenance Procedures

The following preventive maintenance procedures are performed (as applicable) as part of your PerformancePlus Program.

### CONTROL INSPECTION

- Clean and/or repair control cabinet and rotating equipment
- Emergency Stop circuitry check\*
- Record and chart voltage checks
- Record and chart load readings
- Check fuses for correct size and type on all semiconductor equipment
- Safety check of all interlocks, bypasses, limits and grounds
- Check motor and generator temperatures
- Software program backup and revision check
- Communication integrity check
- Document current PLC module loading, configuration and task status

### ELECTRICAL INSPECTION

- Drive calibration
- Insulation and/or temperature test on motors, wires and controls
- Commutator, slip ring and brush inspection
- Check phase balance of current and voltage
- Update wiring diagrams with changes and improvements
- Line analysis (transient, ground, harmonics)
- Operating history analysis and recommendations
- Maintenance history analysis and recommendations
- Verify battery and power supply status
- Visual spare parts check

### MECHANICAL INSPECTION

- Inspect motors, generators and brakes for contamination
- Check brush condition and length
- Check shaft end play, air gap and couplings
- Check air filters
- Tighten all connections and I/O points
- Check alignment, lubrication and condition of all rotating elements
- Perform vibration analysis (optional)
- Complete mechanical inspection of all covered Rockwell equipment

\* can only be performed on inactive system

### STANDARD INFORMATION AND DATA DOCUMENTED IN EQUIPMENT LOGBOOK

- Customer Information and Service Records
- Detailed Maintenance Checklists and Results
- Operator and Maintenance Log Review
- Equipment List and Equipment Layout
- Environmental and Connection Check
- Wiring Diagram Updates
- Description of Operation
- Communication Integrity Check
- On-the-Job Training for Customer Personnel
- Documentation and Trending of Key Electrical Performance Parameters
- Drive Calibration and Adjustment
- Summary report with recommendations for improvement (after each visit)
- Current Machine Status and Condition
- Software Backup and Revision Documentation
- Oscilloscope Waveforms for Key Electrical Measurements

## Recommended Frequency for PerformancePlus Preventive Maintenance Per Year

Programmable Controllers	1/PM/unit
AC and DC Drives & Motors	2/PMs/unit
Motion Control	1/PM/unit
Medium Voltage Drives	2.5-4.5 days/year*

\* Recommended program depends on installed equipment.  
See PerformancePlus terms for more information.

## For More Information

For more information about PerformancePlus Annual Preventive Maintenance Programs, contact your local Rockwell Automation sales office or authorized distributor, or visit <http://support.rockwellautomation.com/supportprograms>.