# Contract Services – Process Analytics Maintain systems and equipment operation at peak performance

ABB delivered Preventive and Corrective maintenance services based on Life Cycle Management deliver on-site advanced diagnostic and repair practices to help maximize the performance of your equipment.



### **Benefits**

- Preventive Maintenance schedules based on Life Cycle Management
- Consumables included

### Product Life Cycle Management

Product life cycle management maximizes the value of equipment and maintenance investments by ensuring spare part and competence availability throughout the life cycle.

- enabling efficient product support & maintenance for improved reliability
- adding functionality to the initial product by following the upgrade path
- providing a smooth transition to new technology at the end of a product's lifecycle
- helping the end user to decide when an upgrade, retrofit or replacement is required

### Preventive Maintenance

A preventive maintenance schedule consists of regular inspections and component replacements according to the product specific maintenance schedule. Maintenance schedules are based on ABB's decade's long experience of manufacturing and maintaining its products. Adopting preventive maintenance schedules reduces the risk of failure and increases the lifetime of the product, thus lowering the overall operational costs. Regular predefined preventive maintenance facilitates budgeting. Preventive maintenance can be carried out on site by certified field service engineers who utilize preventive maintenance tasks. Engineers are factory trained and have the latest maintenance know-how and experience. Preventive maintenance kits contain all the genuine parts defined by a maintenance schedule. They are more economical to purchase compared with purchasing the spare parts separately.

#### Maintenance schedule – PGC5000 Gas Chromatograph

Maintenance schedules are product specific and include consumables.

### Contract Services

A basic contract includes:

- Minimum of 8 hours on-site time. Travel time and travel related expenses are not included and invoiced separately
- Maximum of 4 devices supported per contract day
- 8 hours \$1,920



	Task	Daily	Weekly	Monthly	Quarterly	Bi-Annual	Annually	Comments
<u> </u>				-				
	PGC5000 - Routine Maintenance							
1.00	Controller A							
1.10	Inspect Fiber Optic Cables/no micro bends					ABB		
	Inspect Display Door Cables/properly inserted and taylored					ABB		
2.00	OVEN B/C		<u> </u>					<u> </u>
	Validation - verify calibration and calibrate as necessary.		X			ABB		
2.11	Compare resultant chromatograms with those in Data package.		X			ABB		
			X			ABB		
	Backup controller tables after calibration and/or any changes to system.		X	v		ABB		
	Inspect analytical valves for wear and proper operation, repair as necessary. Check physical condition of analyzer for corrosion, rust, etc.			X X		ABB ABB		
	Inspect Valve O-Ring Kit/Seals, replace if required			^	х	ABB		
	Inspect Sliders / Diaphragm CP Valve / DV22, replace if required				X	ABB		
	Purge air for oven and controller, inspect and replace filter if needed			Х		ABB		
	I/O validation (confirm span and calibration)			Х		ABB		
2.20	Remote communication validations (DCS or Vista)			Х		ABB		
	Analyzer performance validation (columns, flows, peak validation, breather,							
2.21	validation and calibration with standard)		X			ABB		
3.00	Flame Photometric Detector							
2.10	Measure output of FPD to ensure amplifier performance						ABB	
	Jet/Visual Inspection, Replace if needed						ABB	Every 3 years
	Replace Permeation Wafer and O-Ring seal						ABB	Expected life
	ртария и полити и пол		ļ		·			5 years
4.00	TCD							
4.10	Check Bridge Balance					ABB		
	· · · · ·							
5.00	799 FID							
5 10								
	Inspect polarizer/TC thermocouple					ABB		
	Inspect polarizer/TC thermocouple Jet/Visual Inspection, Replace if needed					ABB	ABB	Every 3 years
5.11	Jet/Visual Inspection, Replace if needed					ABB	ABB	Every 3 years
5.11 6.00	Jet/Visual Inspection, Replace if needed Cleanable FID					ABB		Every 3 years
5.11 6.00	Jet/Visual Inspection, Replace if needed					ABB	ABB	Every 3 years
5.11 6.00	Jet/Visual Inspection, Replace if needed Cleanable FID Inspect collector, replace if necessary					ABB		Every 3 years
5.11 6.00 6.10 7.00	Jet/Visual Inspection, Replace if needed Cleanable FID Inspect collector, replace if necessary 791 LSV							Every 3 years
5.11 6.00 6.10 7.00 7.10	Jet/Visual Inspection, Replace if needed Cleanable FID Inspect collector, replace if necessary					ABB		Every 3 years
5.11 6.00 6.10 7.00 7.10 7.11	Jet/Visual Inspection, Replace if needed  Cleanable FID  Inspect collector, replace if necessary  791 LSV Replace Seals					ABB		Every 3 years
5.11 6.00 6.10 7.00 7.10 7.11 7.12	Jet/Visual Inspection, Replace if needed  Cleanable FID Inspect collector, replace if necessary  791 LSV Replace Seals Stem, groove visual Inspection, replace if needed Inspect O-Rings, replace if needed					ABB		Every 3 years
5.11 6.00 6.10 7.00 7.10 7.11	Jet/Visual Inspection, Replace if needed  Cleanable FID Inspect collector, replace if necessary  791 LSV Replace Seals Stem, groove visual Inspection, replace if needed					ABB		Every 3 years
5.11 6.00 6.10 7.00 7.10 7.11 7.12 8.00	Jet/Visual Inspection, Replace if needed   Cleanable FID  Inspect collector, replace if necessary   791 LSV  Replace Seals Stem, groove visual Inspection, replace if needed Inspect O-Rings, replace if needed  Sample Conditioning System Visual Inspection					ABB ABB ABB		Every 3 years
5.11 6.00 6.10 7.00 7.10 7.11 7.12 8.00 8.10	Jet/Visual Inspection, Replace if needed   Cleanable FID  Inspect collector, replace if necessary    791 LSV  Replace Seals Stem, groove visual Inspection, replace if needed Inspect O-Rings, replace if needed  Sample Conditioning System  Visual Inspection Instrument air supply.					ABB ABB ABB ABB		Every 3 years
5.11 6.00 6.10 7.00 7.10 7.11 7.12 8.00 8.10 8.11	Jet/Visual Inspection, Replace if needed   Cleanable FID  Inspect collector, replace if necessary   791 LSV  Replace Seals Stem, groove visual Inspection, replace if needed Inspect O-Rings, replace if needed  Sample Conditioning System Visual Inspection Instrument air supply. Sample system flows and pressure.	Х	Х			ABB ABB ABB ABB ABB		Every 3 years
5.11 6.00 7.00 7.10 7.11 7.12 8.00 8.10 8.11 8.12	Jet/Visual Inspection, Replace if needed   Cleanable FID  Inspect collector, replace if necessary    791 LSV  Replace Seals Stem, groove visual Inspection, replace if needed Inspect O-Rings, replace if needed  Sample Conditioning System  Visual Inspection Instrument air supply.					ABB ABB ABB ABB		Every 3 years

## Contract Services -

For more information, please contact your local ABB Products & Services Representative or ABB @

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