## 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 kits for performing all scheduled 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 - ACF - NT System

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 1 ACF NT System supported per contract day
- 8 hours \$1.920

1	Task	Daily	Weekly	Monthly	Quarterly	Bi-Annual	Annually	Comments
		,		,			,	
	ACF - NT System - Routine Maintenance							
1.00	General							
1.10	Visual Inspection HMI Display		Customer			ABB		
1.11	Visual Inspection Probe Temperature Controller		Customer			ABB		
1.12	Visual Inspection Sample Line Temperature Controller		Customer			ABB		
1.13	Compressed Gases in Cabinet		Customer			ABB		
1.14	Visual Inspection Pressure Regulators - J11, J12, J13, J08		Customer			ABB		
1.15	Verification of ACF-NT gas flows		Customer			ABB		
2.00	Probe Box							
2.00	11000 000							
2.10	Replace Probe Filter				Customer	ABB		
	Check tubing connections					ABB		
	Check Heater Sample Gas Line & Ring Heater					ABB		
2.13	Check Compressed Air Tubing					ABB		
3.00	Calibration				<u> </u>			
	Manual Calibration TOC			Customer		ABB		
_	Manual Calibration TOC			Customer		ABB		
	Calibration with Component Gases Calibration with HOVACAL					ABB		
3.13	Calibration with HOVACAL		ļ		ļ	ABB		
4.00	ADVANCE OPTIMA							
	Save SMT file					ABB		
4.11	Save TCT file		1			ABB		
5.00	MultiFID-14							
5.00	MultiFID-14							
	MultiFID-14  Check Manual Calibration		Customer			ABB		
5.10 5.11	Check Manual Calibration Check Offset/Amplification Drift			Customer		ABB		
5.10 5.11 5.12	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors		Customer	Customer		ABB ABB		
5.10 5.11 5.12 5.13	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter			Customer		ABB ABB ABB		
5.10 5.11 5.12 5.13 5.14	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter Replace Sample Gas Inlet filter			Customer		ABB ABB ABB		
5.10 5.11 5.12 5.13 5.14 5.15	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter			Customer		ABB ABB ABB		
5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter Replace Sample Gas Inlet filter Replace 1/8" Air Filters Replace Detector Sealing Set Replace Injector O-Rings			Customer		ABB ABB ABB ABB ABB ABB ABB		
5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17 5.18	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter Replace Sample Gas Inlet filter Replace 1/8" Air Filters Replace Detector Sealing Set Replace Injector O-Rings Replace Sample Gas Sealing Set			Customer		ABB ABB ABB ABB ABB ABB ABB ABB		
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5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17 5.18 5.19 5.20 5.21 5.22 5.23 5.24 6.00 6.10 6.11 6.12 6.13 6.14 6.15 6.16	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter Replace Sample Gas Inlet filter Replace 1/8" Air Filters Replace Detector Sealing Set Replace Injector O-Rings Replace Sample Gas Sealing Set Check/Replace Nozzle Holder Check/Replace Nozzle Holder Check/Replace Combustion Air Nozzle Check/Replace H2 Nozzle Check/Replace Sample Inlet Nozzle Check/Replace Injector  SC and ASP block  Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace 1/8" Air Filters Replace Injector O-Rings		Customer			ABB		
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5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17 5.18 5.19 5.20 5.21 5.22 5.23 5.24 6.00 6.11 6.12 6.13 6.14 6.15 6.16 6.17 6.18 6.19	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter Replace Sample Gas Inlet filter Replace 1/8" Air Filters Replace Injector O-Rings Replace Injector O-Rings Replace Sample Gas Sealing Set Check/Replace Nozzle Holder Check/Replace Combustion Air Nozzle Check/Replace H2 Nozzle Check/Replace Sample Inlet Nozzle Check/Replace Injector  SC and ASP block  Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace 1/8" Air Filters Replace Injector O-Rings Replace Filter Insert, 1 Micron replace O-Rings for Filter Insert Replace Oasket for SC Block Replace Gasket for SC Block		Customer			ABB		
5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17 5.18 5.19 5.20 5.21 5.22 5.23 5.24 6.00 6.11 6.12 6.13 6.14 6.15 6.16 6.17 6.18 6.19 6.20	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter Replace Sample Gas Inlet filter Replace 1/8" Air Filters Replace Injector O-Rings Replace Injector O-Rings Replace Sample Gas Sealing Set Check/Replace Nozzle Holder Check/Replace Nozzle Holder Check/Replace Combustion Air Nozzle Check/Replace Bample Inlet Nozzle Check/Replace Sample Inlet Nozzle Check/Replace Injector  SC and ASP block  Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Injector O-Rings Replace Injector O-Rings Replace Filter Insert, 1 Micron replace O-Rings for Filter Insert Replace O2 Sealing Set Replace Gasket for SC Block Clean/Replace Injector		Customer			ABB		
5.10 5.11 5.12 5.13 5.14 5.15 5.16 5.17 5.18 5.19 5.20 5.21 5.22 5.23 5.24 6.00 6.11 6.12 6.13 6.14 6.15 6.16 6.17 6.18 6.19 6.20 6.20 6.20 6.20 6.20	Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace Protection Filter Replace Sample Gas Inlet filter Replace 1/8" Air Filters Replace Injector O-Rings Replace Injector O-Rings Replace Sample Gas Sealing Set Check/Replace Nozzle Holder Check/Replace Nozzle Holder Check/Replace Combustion Air Nozzle Check/Replace Sample Inlet Nozzle Check/Replace Sample Inlet Nozzle Check/Replace Injector  SC and ASP block  Check Manual Calibration Check Offset/Amplification Drift Check Pressures and Flow Detectors Replace 1/8" Air Filters Replace Injector O-Rings Replace Filter Insert, 1 Micron replace O-Rings for Filter Insert Replace Saeling Set for Bridge Replace Sasket for SC Block Clean/Replace Injector Clean/Replace I Micron Metal Filter		Customer			ABB		
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### Contract Services -

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

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