

## SELMA 2 mapped automation system Preventive maintenance kits



Preventive maintenance kits contain all necessary replacement parts for the specific scheduled maintenance. The content of each kit is carefully defined to match the SELMA 2 maintenance schedule. The kits have been specified based on ABB's extensive SELMA 2 system and component maintenance experience.

Preventive maintenance kit is a selected package of necessary parts needed for SELMA 2 mapped system preventive maintenance service.

### Benefits

- Pre-defined, genuine service parts are provided according to the maintenance schedule
- Easy-to-order coded material package
- Kit pricing is more economical than the cost of purchasing individual parts
- Reduced maintenance costs
- Increased maintenance performance efficiency
- Preventive maintenance kits provide the correct parts for each preventive maintenance

### Service provides

The delivered preventive maintenance (PM) kits contain the service parts for preventive maintenance. See table below:

	Every 3 <sup>rd</sup> year	Every 6 <sup>th</sup> year	Every 9 <sup>th</sup> year
Cooling fan unit in cabinet	x		
Batteries on SELMA boards	x		
Fan filters in cabinet and cooling system	x		
Keyboard overlay		x	
Fan in SELMA cabinet		x	
New: Power unit in SELMA cabinet or Updates: Capacitors of power unit			x

PM kits can be selected and ordered by giving the original project number or sales number of SELMA 2 mapped system.

### Preparations before preventive maintenance

PM kits are delivered on lead-time basis, contrary to normal spare parts, hence the PM kits must be ordered well in advance of the planned preventive maintenance. More information regarding PM kits and their content visit: [www.abb.com/partsonline](http://www.abb.com/partsonline).

#### Product Lifecycle Services

- Installation & Commissioning
- Training
- Support & Remote Services
- Spare Parts & Repairs
- Maintenance & Field Services
- Migration & Retrofits
- Optimization



## Maintenance schedule

Based on ABB's experience, however, failure probability of such industrial products equipped with electronic components, such as automation systems, increases after years of operation.

For automation systems this is typically 5 to 10 years. One of the main reasons for failures is the aging of components, but it is also highly affected by operational conditions. A component failure may cause consequential damage to other parts of the automation system.

A maintenance schedule provides a systematic and functional means of maintaining SELMA 2 automation systems. It is based on extensive experience

and knowledge of manufacturing and maintaining SELMA 2 systems. Specifications of component suppliers are observed carefully.

The environmental and operational conditions of the system are also considered. Demanding environments, such as high ambient temperature can measurably shorten component lifetime and also maintenance and component replacement intervals.

ABB recommends an annual inspection in addition to regular maintenance to be carried out to ensure optimum automation system performance through its entire lifetime.

	Years from start-up																					
	0	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
<b>Start-up</b>	P																					
<b>Operation Station</b>																						
> Visual inspection	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Mechanical joints	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Key board overlay	I	I	I	R	I	I	I	I	I	R	I	I	I	I	I	R	I	I	I	I	I	
> Output device	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Inspection of disk station/stations	P	I	I	P	I	I	P	I	I	P	I	I	P	I	I	P	I	I	P	I	I	
> Operate system function test	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
> System backup				P					P						P					P		
<b>SELMA 2 cabinet</b>																						
> Visual inspection	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Mechanical joints	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Main power supply (UPS)			P						P						P					P		
> Auxiliary voltages	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Power supply unit	I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	I	R	I	I	I	I	
> Cooling fan unit	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	
> Batteries on SELMA boards	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	
> Fan on SELMA	I	I	I	R	I	I	I	I	I	R	I	I	I	I	I	R	I	I	I	I	I	
> Cleaning/ change of fan filter	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	
> Cleanliness of SELMA racks			P						P						P					P		
<b>Battery</b>																						
> Visual inspection	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Mechanical joints	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Auxiliary voltages	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Water levels of batteries	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
<b>Cooling system</b>																						
> Visual inspection	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Mechanical joints	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Cleaning/ change of fan filter	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	R	I	I	
<b>Parameters</b>																						
> Inspection and change	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Backing-up the parameters from programs to EEPROM	P			P			P			P			P			P			P			
<b>M-Unit (DG automatic)</b>																						
> Checking the panels	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Switch function inspection	P			P			P			P			P			P			P			
<b>Updates in Electric Repair Center</b>																						
> Change the capacitors of power units	I	I	I	I	I	I	R	I	I	I	I	I	I	I	I	R	I	I	I	I	I	
<b>Improvements</b>																						
> SW / HW upgrade to improve performance if necessary	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> ABB VideoPrint	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> SELMA 2 modbus	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
> Electrical interface RS232	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	
<b>Spare Parts</b>																						
> Spare parts	I			I					I						I				I			



**ABB Oy**  
 Product Support  
 PO Box 116  
 FIN-00381 Helsinki, Finland  
 Tel: +358 10 22 11  
 Fax: +358 10 22 26800  
 www.abb.com/motors&drives  
 e-mail: sales.productsupport@fi.abb.com

Legend:  
**R** = Replacement of component  
**I** = Inspection (visual inspection, correction and replacement if needed)  
**P** = Performance of on-site work (commissioning, tests, measurements, etc.)