Preventive maintenance kits for wind turbine generators, AM_ 500

SM018 EN REV A 2006

Service notes

ABB's preventive maintenance kits for wind turbine generators contain the replacement parts required for a scheduled maintenance. Based on extensive experience, the content of the each kit is carefully specified to match the customers' maintenance schedule.

Benefits

- Preventive maintenance kits contain genuine service parts and are tailored to the customer's maintenance schedule
- Kits are priced more economically than individually ordered parts
- Kits make annual and long-term maintenance material budgets easy to plan
- Maintenance efficiency is increased
- Maintenance schedules and kits are planned in conjunction with generator owners
- Parts are carefully selected and tested for the specific operating conditions
- Mean Time Between Failure (MTBF) is increased
- Generator reliability and availability are increased
- Unplanned shutdowns are prevented and repair costs reduced

Ordering preventive maintenance kits

The Preventive Maintenance kits contain the service parts required for a scheduled maintenance, based on the recommended replacement intervals. The actual list of parts to be replaced will vary according to the way the generator is used. Recommended replacement intervals are shown in the table overleaf.

Preventive Maintenance kits can be selected and ordered on the basis of the generator serial number, ensuring that the correct parts are available when maintenance is carried out. Unlike individually ordered parts, the kits may contain materials subject to a long delivery time and so should be ordered well in advance of the scheduled maintenance work.
For more information regarding Preventive Maintenance kits please contact:

Email: aftersales.machines@fi.abb.com
Fax: +358 10 22 22544

There is also a possibility to order standard spare parts via Parts On Line. If you are interested in Parts On Line system you are welcome to visit our internet site: http://www02.abb.com/partsonline.

FACT FILE

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Maintenance schedule

Experience indicates that Mean Time Between Failure for generators decreases after a number of years in operation. The main reason is component wear, but operating conditions also play a major role. In the case of a wind turbine generator, failure of a component may cause damage into other parts of the machine, including the stator and rotor. This could lead to a shutdown of the entire windmill.

The maintenance schedules are based on extensive know-how and they provide an effective and systematic means of maintaining wind turbine generators. They comply with specifications issued by the component suppliers.

Environmental and operating conditions are also taken into account. Tough conditions - such as high ambient temperatures or a heavy load - can significantly shorten component lifetime and reduce maintenance and component replacement intervals.

In order to ensure optimum performance over the entire lifetime of a generator, ABB recommends that regular inspections are carried out in addition to annual maintenance.

Example of preventive maintenance part replacement intervals tailored to customer's maintenance plan.

Recommended replacement intervals	1 year	2 years	5 years	10 years
Bearings				
Bearings for DE and NDE			x	x
Bearing part set for DE				x
Bearing part set for NDE				x
Insulated bearing shield				x
Heat Exchanger				
Blower motors			x	x
Slip Ring Unit				
Grounding slip ring				x
Grounding carbon brush set	x	x	x	x
Slip ring carbon brush set	x	x	x	x
Brush holder			x	x
Brush holder device			x	x
Slip ring unit				x
Tachometer				
Pulse encoder		x	x	x
Tachometer accessories			x	x
Flexible tachometer coupling			x	x

Please note that the given recommendations are suggestive.
Tailor made application may differ from the recommendations.

Please note that some of the part replacements shown in the table may not be necessary in all generators.

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