

Services note

Cut ACS880 drive operating costs with preventive maintenance



Installed drives are maintained according to planned schedules, thereby controlling maintenance costs and optimizing lifetime performance.

The importance of maintenance

The failure probability of industrial products equipped with electronic components, such as drives, increases over time. Aging components are the primary reason, but the operating conditions also play a big part. High ambient temperatures, humidity, dirt, dust and heavy loads all shorten lifetimes and mean more frequent maintenance and component replacements.

Preventive Maintenance – the lifeblood of a drive

Drive preventive maintenance consists of annual drive inspections and component replacements following the product-specific maintenance schedule.

Preventive maintenance takes place during planned production shutdowns. These should be planned well in advance and the necessary resources and parts need to be reserved. Parts and materials used in preventive maintenance are bundled into Preventive Maintenance kits which are delivered to a lead-time, unlike normal spare parts.

Preventive Maintenance kits

Preventive Maintenance kits contain all the necessary genuine ABB replacement parts for scheduled maintenance. The content of each kit is carefully selected to match the maintenance schedule and the size and other characteristics of a particular drive.

Preventive Maintenance kits can be selected and ordered according to the number of drives in use and their age, ensuring that all the required parts are available for maintenance.

All labor and service parts included

The Preventive Maintenance service includes labor, and the Preventive Maintenance kits to perform the work according to the maintenance schedule.

Tests include:

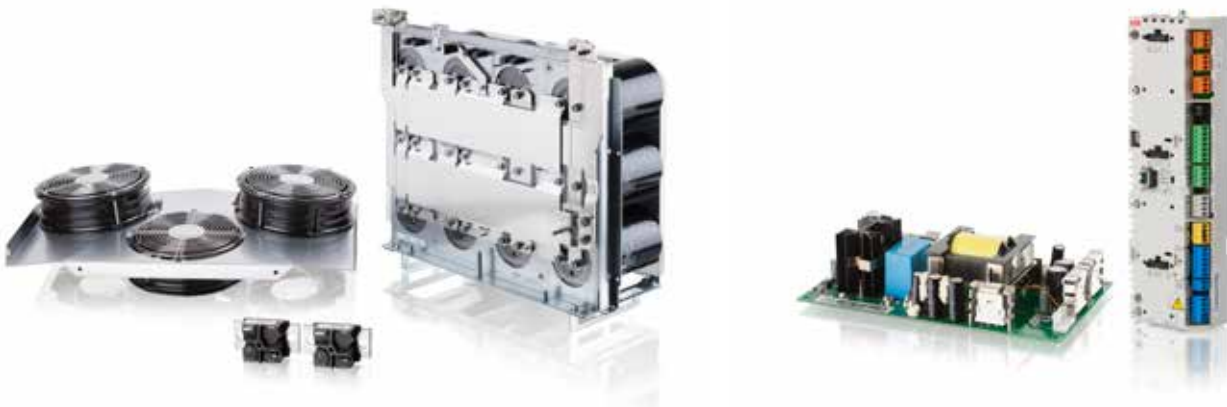
- functional testing of the drive under normal conditions
- basic measurements with supply voltage

In addition, the following can be purchased as options:

- ESD protected cleaning of the drive
- reforming the electrolytic capacitors of the spare modules.
- drive spare part inventory

A detailed service report, including recommendations for future actions, is provided once the maintenance work is completed and the inspection data fully analyzed.

The parts in a Preventive Maintenance kit cost less than parts sourced individually. Proactive preventive maintenance is therefore more cost-effective than sourcing spares in an emergency or general repair job. The local ABB representative can define, select and deliver the correct parts and help plan preventive maintenance. Visit www.abb.com/drives to find your nearest ABB representative.



A Preventive Maintenance kit is a selected package of genuine ABB spare parts needed for preventive maintenance of ABB drives. The picture above shows some 9- and 12-year preventive maintenance kits for ACS880-04 drives.

An example of Preventive Maintenance schedule for ACS880 single drives

Recommended annual actions by the user	Annually
Connections and environment	
Cabinet door filters IP54	R
Quality of supply voltage	P
Spare parts	
Spare parts	I
DC circuit capacitors reforming, spare modules and spare capacitors	P
Inspections by user	
IP22 and IP42 air inlet and outlet meshes	I
Tightness of terminals	I
Dustiness, corrosion and temperature	I
Heat sink cleaning	I
Other	
ABB-SACE Air circuit breaker maintenance	I

Cooling	Years from start-up						
	3	6	9	12	15	18	21
Main cooling fan							
Main cooling fan (R1 to R9) speed controlled		R		R		R	
Main cooling fan (R10 and R11) speed controlled			R			R	
Main cooling fan (R8i and D8T) speed controlled			R			R	
Main cooling fan (D7T) speed controlled		R		R		R	
Main cooling fan (BLCL) direct online 50 Hz		R		R		R	
Main cooling fan (BLCL) direct online 60 Hz		R		R		R	
Aux cooling fan							
Auxiliary cooling fan for circuit boards (R1 to R9)		R		R		R	
Auxiliary cooling fan IP55 (R8 and R9)		R		R		R	
Cooling fan for circuit board compartment (R10 to R11)		R		R		R	
Internal cooling fan for circuit boards (R8i and D8T)		R		R		R	
Cabinet cooling fan							
Cabinet cooling fan, internal		R		R		R	
Cabinet cooling fan, door		R		R		R	
Cabinet cooling fan IP54		R		R		R	
xSIN filter cooling fan							
Filter cooling fan		R		R		R	

Aging	Years from start-up						
	3	6	9	12	15	18	21
Frequency converter R1 to R9							
Flat ribbon cables (R6 to R9)				R			
DC circuit electrolytic capacitors (R6 to R9) and discharging resistors			R			R	
ZINT, ZPOW, ZINP (R6 to R9) module internal circuit boards				R			
ZCU control unit				R			
ZCU control unit battery (Real-time clock)		R		R		R	
Control panel battery (Real-time clock)			R			R	
Inverter module, IGBT Supply module R8i							
DC circuit electrolytic capacitors (R8i) and discharging resistors			R				
BDPS, BFPS module internal power supply boards				R			
BINT, BGDR, BDFC module internal circuit boards				R			
Flat ribbon cables (when boards replaced)				R			
BCU control unit				R			
BCU control unit battery (Real-time clock)		R		R		R	
Control panel battery (Real-time clock)			R			R	
Supply modules D7T and D8T							
BDPS, BFPS module internal power supply boards				R			
BINT, BTDR, BPCB, BDFC module internal circuit boards				R			
Flat ribbon cables (when boards replaced)				R			
BCU control unit				R		R	
BCU control unit battery (Real-time clock)		R		R		R	
Control unit battery (Real-time clock)			R				
Filter unit capacitors							
BLCL capacitor			R			R	
NSIN capacitor		R		R		R	

NOTE! Long term operation near the maximum specified ratings or environmental conditions may require shorter maintenance intervals for certain components. Check the device specific technical specifications in the relevant hardware manual and consult your local ABB Service for maintenance recommendations at:
www.abb.com/searchchannels

Legend:
 I = Inspection (visual inspection and maintenance action if needed)
 P = Performance of on/off-site work (commissioning, tests, measurements or other work)
 R = Replacement

Contact us

For more information, contact your local ABB representative or visit:

www.abb.com/drives

www.abb.com/drivespartners

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