

MOTION SERVICES

Maintenance schedule for ACS800

Applied to Industrial Single Drives, Multidrives and Liquid-Cooled Drives, manufactured or maintained 2017 and onwards.

For drives manufactured or maintained 2017 and onward please refer to [4FPS10000223379](#).



Recommended maintenance intervals and component replacements are based on specified operational and environmental conditions. ABB recommends annual drive inspections to ensure the highest reliability and optimum performance.

Note

Long term operation near or over the maximum specified ratings or environmental conditions may require shorter maintenance intervals.

Check the device specific technical specifications in the relevant hardware manual and consult your local ABB Service for maintenance recommendations at: [/new.abb.com/channel-partners/search](https://new.abb.com/channel-partners/search)

More detailed maintenance information can be found in maintenance instructions, product manuals and on the Internet:

[/new.abb.com/drives](https://new.abb.com/drives)

See the below listed technical notes for more details on component aging and possible effects on the drive.

Electrolytic capacitors	4FPS10001015180
Film capacitors	4FPS10001454838
IGBTs	4FPS10001147623
Cooling fans	4FPS10001147616
PCBAs	4FPS10001147621
Power supplies	4FPS10001454842

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FUNCTIONAL SAFETY ACTIONS

Safety function test interval	I	The drive can be a part of a safety system or application which requires periodic testing. The customer defines the test interval of the complete safety system or application. Use this test interval to test the safety function.
Safety component expiry (Mission time T_M) 20 years	R	The mission time of the ABB LV AC drive safety component is 20 years in the safety data of the drive product. The safety data is introduced in the product hardware manual.

RECOMMENDED ACTIONS BY THE USER	Years from startup																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Connections and environment																					
Cabinet door filters IP54	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Quality of supply voltage	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Cooling liquid pipe connections	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Spare parts																					
DC circuit capacitors reforming, spare modules, and spare capacitors	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Inspections by user																					
IP22 and IP42 air inlet outlet meshes	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Tightness of terminals	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Dustiness, corrosion and temperature	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Heatsink cleaning	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Other																					
ABB-SACE Air circuit breaker maintenance	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Main contactor maintenance	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
ACS800-14LC/-17LC/-34LC/-37LC/-204LC/ -207LC Smoke detector	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Cooling, liquid cooling units																					
Check pH of coolant		P		P		P		P		P		P		P		P		P		P	
Add coolant corrosion inhibitor		P		P		P		P		P		P		P		P		P		P	
Heat exchanger cleaning		P		P		P		P		P		P		P		P		P		P	
Expansion tank air pressure		P		P		P		P		P		P		P		P		P		P	

- 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

COOLING	Years from startup																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Main cooling fan																					
ACS800-01, -U1, -04, -U4 R2 - R6, ACS800-104 R2i - R5i (IP20, IP21, IP55)			I			R			I			R			I			R			I
ACS800-02, -U2 R7 and R8 50/60Hz			I			R			I			R			I			R			I
ACS800-02, -U2 enclosure extension cooling fan R7 and R8 50/60Hz			R			R			R			R			R			R			R
ACS800-04, -U4, -04M R7 and R8 50/60Hz			I			R			I			R			I			R			I
⁽¹⁾ ACS800-02, -04, -U4, -04M R7 and R8 50/60Hz LONGLIFE			I			I			R			I			I			R			I
Cooling fan for ACS800-11, -U11, -31, -U31 R5 - R6 (IP20, IP21, IP55)			I			R			I			R			I			R			I
ACS800-104, -204 R7i - R8i LONGLIFE			I			I			R			I			I			R			I
ACS800-304, -704			I			R			I			R			I			R			I
ACS800-304, -704 +V992 LONGLIFE			I			I			R			I			I			R			I
ALCL filter module LONGLIFE			I			I			R			I			I			R			I
ACS800-404, TSU			I			R			I			R			I			R			I
Internal cooling fan for circuit boards																					
ACS800-01, -U1, -04, -U4 R2 - R6			R			R			R			R			R			R			R
ACS800-104 R2i - R5i (IP20, IP21, IP55)			R			R			R			R			R			R			R
ACS800-11, -U11, -31, -U31 R5 - R6 (IP20, IP21, IP55)			R			R			R			R			R			R			R
Cabinet cooling fan																					
IP22-IP42 Roof fan LONGLIFE			I			I			R			I			I			R			I
IP22-IP42 Door fan LONGLIFE			I			I			R			I			I			R			I
IP54 Roof fan LONGLIFE			I			I			R			I			I			R			I
Internal cooling fan LONGLIFE			I			I			R			I			I			R			I
Cooling, liquid cooled units																					
Cooling fans ACS800LC (-204LC, -304/704LC), 50Hz LONGLIFE"			I			I			R			I			I			R			I
Cooling fans ACS800LC (-104LC), 60Hz LONGLIFE			I			I			R			I			I			R			I
Cooling fans ACS800LC (-104LC), 50Hz			I			R			I			R			I			R			I
Cooling fans ACS800LC (-204LC, -304/704LC), 60Hz			I			R			I			R			I			R			I
Cabinet cooling fans ACS800LC 50/60Hz LONGLIFE			I			I			R			I			I			R			I
Roof cooling fans ACS800LC 50/60Hz			I			R			I			R			I			R			I
Cooling liquid pump assembly			I			R			I			R			I			R			I
Change coolant in internal cooling circuit			I			I			R			I			I			R			I
Expansion tank			I			I			R			I			I			R			I

⁽¹⁾ ACS800-02/04/U4 R7-frame Long Life Fan after 06/2019

- 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

AGING	Years from startup																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Common																					
Electrolytic capacitors									R									R			
Converter electronic boards: APOW, AFIN, AFPS, AGPS, AINP, CMRB, CMIB, DSMB, DSAB, DSCB, RINT ⁽²⁾ , GINT ⁽²⁾									R									R			
⁽³⁾ Cabinet Auxiliary Power Supplies									R									R			
Memory backup battery replacement in APBU-xx unit						R						R						R			
⁽⁴⁾ ALCL filter capacitor 380 - 415V supply network (ACS800-14, -17, -37, -38, -67, md)						I			I/R			I			I			I/R			I
⁽⁴⁾ ALCL filter capacitor 460V - 690V supply network** (ACS800-14, -17, -37, -38, -67, md)						I/R			I			I/R			I			I/R			I
Smoke detector for ACS800-14LC, -17LC, -34LC, -37LC, -204LC, -207LC Smoke detector									R									R			
Connections																					
AINT+ flat cables, CINT, NRED, discharging resistors									R									R			
Power cable connections and quick connectors of the supply, inverter and converter modules (ACS800-x7 and ACS800 md)			I			I			I			I			I			I			I
Improvements																					
Based on product notes			I			I			I			I			I			I			I

⁽²⁾ Not included in default 9Y PMkit. Recommended to change in harsh or highly stressful environment conditions.

⁽³⁾ Check the amount and types of Auxiliary power supplies from the cabinet or manufactured BOM.

⁽⁴⁾ If a filter capacitor is not replaced, the filter shall be inspected/measured after 3 years from the last inspection.

- 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

Note

Long term operation near or over the maximum specified ratings or environmental conditions may require shorter maintenance intervals. To minimize the risk of failures in the frequency converter, ABB recommends including IGBT modules as part of the maintenance program. ABB suggests a module reconditioning at the authorized Drives Service Workshop in these cases. Reconditioning restores all the drive's aging components to the latest version and revisions. That improves the drive's reliability and extends its lifetime.

More information about **reconditioning**.

Please consult your local ABB for more details on the maintenance program and available services.