MOTION SERVICES

Maintenance schedule for ACS580, ACH580 and ACQ580 drives

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

More detailed maintenance information can be found in maintenance instructions, product manuals and on the Internet:
/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
Cooling fans	4FPS10001147616
PCBAs	4FPS10001147621
Power supplies	4FPS10001454842

(C) Copyright 2022 ABB, all rights reserved

For drives manufactured or maintained 2017 and onwards

ACS580-01/-04, ACH580-01/-04/-31/-34 and ACQ580-01/-04/-31/-34
ACS580-07, ACH580-07, ACQ580-07 Cabinet Drives

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
Spare parts																					
Spare parts	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
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 and 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
Heat sink cleaning	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

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

(C) Copyright 2022 ABB, all rights reserved

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
Fans, IP21 frames R0 to R9																					
Main cooling fans R0-R5						R						R						R			
Main cooling fans R6-R9 LONGLIFE									R									R			
Auxiliary cooling fan for circuit boards, R4v2 89A/IP21 & R4v2 77A/IP21						R						R						R			
Auxiliary cooling fan for circuit boards, only R5 - R9 LONGLIFE									R									R			
Fans, IP55 frames R0 to R9																					
Main cooling fans R0-R5						R						R						R			
Main cooling fans R6-R9 LONGLIFE									R									R			
Auxiliary cooling fan for circuit boards R0-R2 (Main fan on Bottom)			R			R			R			R			R			R			R
Auxiliary cooling fan for circuit boards R1-R2 (Main fan on Top)						R						R						R			
Auxiliary cooling fan for circuit boards R3, R4 LONGLIFE									R									R			
Auxiliary cooling fan for circuit boards R4v2						R						R						R			
Auxiliary cooling fan(s) for circuit boards R5-R9 LONGLIFE									R									R			
Auxiliary cooling fan in IP55 cover, only R8 and R9 LONGLIFE									R									R			
Fans, ACH580-31, ACQ580-31 frames R3, R6, R8																					
Main cooling fans LONGLIFE									R									R			
Auxiliary cooling fans LONGLIFE									R									R			
Fans, frames R10 and R11																					
[(1)] Main cooling fans									R									R			
Circuit board compartment cooling fans LONGLIFE									R									R			
Cabinet cooling fan R6 to R9																					
Cabinet cooling fan, door (IP21, IP42, IP54)									R									R			
Cabinet cooling fan R10 to R11																					
Internal LONG-LIFE 50Hz									R									R			
Internal LONG-LIFE 60Hz						R						R						R			
Door LONG-LIFE 50 Hz									R									R			
Door LONG-LIFE 60Hz									R									R			
[(1)] IP54 50Hz									R									R			
[(1)] IP54 60Hz						R						R						R			
Cabinet cooling fan IP54									R									R			

[(1)] Fan has been always "LONG-LIFE" type

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

(C) Copyright 2022 ABB, all rights reserved

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
Control panel battery																					
Control panel battery									R									R			
[2] Cabinet auxiliary 24VDC power supplies and buffers												R									
Frequency converter frames R0 to R9																					
CCU control unit												R									
Frequency converter frames R6 to R9 (Except R6 ACH580-31 & ACQ580-31)																					
Flat ribbon cables												R									
DC circuit electrolytic capacitors and discharging resistors									R									R			
Module internal circuit boards ZINT, ZPOW, ZINP, QINT												R									
Frequency converter frames R10 to R11																					
Flat ribbon cables												R									
DC circuit electrolytic capacitors and discharging resistors									R									R			
Module internal circuit boards BPOW / ZPOW												R									
Module internal circuit boards BFPS, BGDR, ZBDR, ZINT, BINT												R									
CCU control unit, ZCU control unit ACH580-34 & ACQ580-34 R11												R									

[2] Check amount and types of Auxiliary power supplies from cabinet or manufactured BOM.

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

(C) Copyright 2022 ABB, all rights reserved

For drives manufactured 2016 or before

ACS580-01/-04, ACH580-01 and ACQ580-01 Drives
ACS580-07 Cabinet Drives

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																					
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
Spare parts																					
Spare parts	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
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																					
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
Heat sink cleaning	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I

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
Fans, IP21 frames R0 to R9																					
Main cooling fans						R						R						R			
Auxiliary cooling fan for circuit boards, only R5 to R9			R			R			R			R			R			R			R
Fans, IP55 frames R0 to R9																					
Main cooling fans						R						R						R			
Auxiliary cooling fan for circuit boards			R			R			R			R			R			R			R
Auxiliary cooling fan in IP55 cover, only R8 and R9			R			R			R			R			R			R			R
Fans, frames R10 and R11																					
Main cooling fans									R									R			
Cooling fans for circuit board compartment						R						R						R			
Cabinet cooling fan R10 to R11																					
Internal 50Hz						R						R						R			
Internal 60Hz			R			R			R			R			R			R			R
Door 50 Hz						R						R						R			
Door 60Hz						R						R						R			
IP54 50Hz									R									R			
IP54 60Hz						R						R						R			

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

(C) Copyright 2022 ABB, all rights reserved

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
Control panel battery																					
Control panel battery									R									R			
Frequency converter frames R0 to R9																					
CCU control unit												R									
Frequency converter frames R6 to R9 (Except R6 ACH580-31 & ACQ580-31)																					
Flat ribbon cables												R									
DC circuit electrolytic capacitors and discharging resistors									R									R			
Module internal circuit boards ZINT, ZPOW, ZINP												R									
CCU control unit												R									
Frequency converter frames R10 to R11																					
Flat ribbon cables												R									
DC circuit electrolytic capacitors and discharging resistors									R									R			
Module internal circuit boards BPOW / ZPOW												R									
Module internal circuit boards BFPS, BGDR, ZBDR, ZINT												R									
CCU control unit												R									

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

(C) Copyright 2022 ABB, all rights reserved