

# Component Life Cycle Replacement Schedule

(updated to September 2016)

Product	Eaton 9PHD 30-200 kW	Maintenance		Responsibility	
Sub Equipment	Operation description	Agents that may effect the aging factor	Frequency	Local Operator	Approved FSE by Eaton
UPS	Visual inspection and control of any unexpected warning/alarm and noise		Daily	✓	
	Inspection of the UPS measurements by display		Monthly	✓	
	Inspection of the connectivity devices		Daily	✓	
	Visual inspection of the batteries and of the automatic monthly battery test results		Every month	✓	
	Battery test (manual)		1-2 times per year	✓	✓
	Inspection of UPS parameters, calibration and alarm log		1-2 times per year		✓
	UPS internal and external cleaning		1-2 times per year		✓
	Verify UPS functionality (double conversion, on battery, on bypass ...)		1-2 times per year		✓
ISBM	Visual inspection of the air filters. Eventually vacuum them	Dust, humidity, general site conditions	Every 4 months	✓	✓
	Air filter replacements	Dust, humidity, general site conditions	1 time per year if the site is clean, 2-3 time for more harsh environments	✓	✓
	Visual Inspection of the FANs	Dust, humidity, general site conditions, temperature	Every year		✓
	FANs replacement	Dust, humidity, general site conditions, temperature	7 years if site conditions are clean at 40 C		✓
	Interface/control boards replacement	Dust, humidity, general site conditions, temperature	15 years if site conditions are clean		✓
	Fan Control board	Dust, humidity, general site conditions, temperature	10 y, up to 40 C environmental temperature		✓
	Battery on the communication board replacement		5 years starting with the date the unit is manufactured		✓
UPM	Visual inspection of the air filters. Eventually vacuum them	Dust, humidity, general site conditions	Every 4 months	✓	✓
	Air filter replacements	Dust, humidity, general site conditions	1 time per year if the site is clean, 2-3 time for more harsh environments	✓	✓
	Visual Inspection of the FANs	Dust, humidity, general site conditions, temperature	Every year		✓
	FANs replacement	Dust, humidity, general site conditions, temperature, load level	7 years if site conditions are clean at 40 C, <80% load		✓
	Rectifier/Inverter I/O boards	Dust, humidity, general site conditions, temperature	10 years if site conditions are clean at 40 C		✓
	Power Supply boards replacement	Environmental temperature	10 y, up to 40 C environmental temperature		✓
	Inspection and capacitance measurement of the Capacitors	Ripple current, temperature, operational mode (double conversion, ESS, VMMS), load level	Every year		✓
	DC Capacitor board	Ripple current, temperature, operational mode (double conversion, Eco Mode), load level	7 years if site conditions are clean at <35 C in double conversion		✓
	Power Module replacement (rectifier/Inverter)	Ripple current, temperature, operational mode (double conversion, ESS, VMMS), load level	15 years if continuously working on double conversion, site conditions are clean and load level is <80%, 400V I/O, up to 30 C environmental temperature		✓