



Preventive maintenance operations

HB9m (8DN9-0) range

170-245 kV

Preventive maintenance operations - 170-245kV range / HB9m - 8DN9-0

The operations of maintenance are described in normal conditions of use and can differ according to the installations, in function in particular of the number of operating cycles and the conditions of environment.

Maintenance operation designation	HB9m (8DN9-0)				
	1 year	5 years (or multiples of 1000 maneuvers)	10 years	20 years (or 10 000 cycles)	After 2 short- circuit closures
GENERAL ASPECT					
General cleanliness	●	●	●	●	
Paints and protections inspection	●	●	●	●	
Galvanized steel structure visual inspection	●	●	●	●	
Mastic beads visual inspection	●	●	●	●	
Earthing circuits visual inspection	●	●	●	●	
Cable trays visual inspection	●	●	●	●	
Visual inspection of absence of corrosion	●	●	●	●	
Random check of bolts tightening	●	●	●	●	
COMPARTMENT					
Check the SF6 pressure	●	●	●	●	
SF6 refillings (if needed)	●	●	●	●	
Follow-up of SF6 refillings (done by customer)	●	●	●	●	
Dewpoint tests		●	●	●	
Gas purity (% SF6)		●	●	●	

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Density switch tests		●	●	●	
Check the horizontal safety disc rainproof protection (if present)*		●	●	●	
Horizontal safety disc rainproof protection replacement (if present)*			●	●	
Sleeves (dimensions verification)			●	●	
LCC (Local Control Cubicle)					
Operations counter (number of operation)	●	●	●	●	
Check the heating resistor	●	●	●	●	
Check the lighting	●	●	●	●	
Check the air vents	●	●	●	●	
"Opening" and "closing" cycle in local and remote modes (**)	●	●	●	●	●
Wiring and earthing cables verification (random tests)			●	●	
Check the interlocking				●	
DISCONNECTOR AND EARTHING SWITCH					
Check the position indicator	●	●	●	●	
Transmission rods visual inspection	●	●	●	●	

* Only on external GIS

** Reminder: recommendation to realize a cycle of O/C to each device

Consult MasterGrid to determine tests and maintenance actions to be carried out when the above limits are reached. After each maintenance, more operations may be recommended by the manufacturer. These maintenance operations must be carried out by manufacturer-trained and certified staff.



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Check the main contacts by viewports (if present)		●	●	●	
1 manual operation			●	●	
Operating time measurement			●	●	
Driving mechanism visual inspection			●	●	
Contact resistance measurement			●	●	

SHORT CIRCUIT MAKING CAPACITY EARTHING SWITCH

Check the position indicator	●	●	●	●	
Transmission rods visual inspection	●	●	●	●	
Check the main contacts by viewports (if present)		●	●	●	
Greasing of external springs		●	●	●	
1 manual operation			●	●	
Operating time measurement			●	●	
Driving mechanism visual inspection			●	●	
Contact resistance measurement			●	●	
Internal main contacts replacement					●

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CT / VT					
Wiring visual inspection		●	●	●	
Isolation test (2KV 1 minute)				●	
SURGE ARRESTER					
Impulse counter (number of operations)	●	●	●	●	
AIR / SF6 BUSHINGS					
Cleanliness and condition visual inspection	●	●	●	●	
Corona shield and connections visual inspection	●	●	●		
CABLE BOX					
HV cable position visual inspection	●	●	●	●	
TRANSFORMER BUSHING					
Non linear resistances visual inspection	●	●	●	●	
Insulating sleeves visual inspection (if present)	●	●	●	●	
MONITORING					
Check the arc detection system				●	
Check the UHF system				●	
Check the gas monitoring system				●	

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CIRCUIT BREAKER					
Operations counter (number of operations)	●	●	●	●	
Check the O/C position indicator	●	●	●	●	
Check the lighting	●	●	●	●	
Check the heating resistor	●	●	●	●	
Electrical and functional tests		●	●	●	
Spring drive mechanism greasing		●	●	●	
Circuit breaker timing measurement		●	●	●	
Circuit breaker synchronism measurement		●	●	●	
Circuit breaker speed operation measurement			●	●	
Contact resistance measurement			●	●	
Active part examination	Every 5 000 cycles				
Active part maintenance				●	
Tripping-closing coils replacement				●	
O/C spring replacement				●	

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The information contained in this document contains descriptions of the technical possibilities, which in some cases, are not always available.

Consequently, the desired performance characteristics must be stipulated when the contract is signed.