Service description

SF₆ Gas-insulated Switchgear
Maintenance of circuit-breaker drive mechanism ELK SN/BBC

Keep switchgear performance at a high level

The primary goal of recommended maintenance is to prevent failures and to extend the switchgear lifetime. The result is a major improvement in reliability, safety and performance – an outstanding way to optimize costs for operation.

Main advantages of planned maintenance
- prevent failures
- extend lifetime significantly
- reduce failure risk
- minimize and plan outage time
- maintain the value of the circuit-breaker drive mechanism
- maximize switchgear performance
- identify problems at an early stage, prior to escalation

The type and frequency of maintenance is affected by several factors. Depending on specific criteria, we recommend the following option:

Overhaul
- if the drive mechanism has reached its maximum number of operations
- if the drive mechanism has reached its maximum lifetime based on local environmental conditions and years in operation
- if recommended in the diagnosis report

The knowledge of how to balance time-based and condition-based overhaul criteria is a key factor for successful maintenance, mastered and executed with excellence by ABB service engineers.
Scope of work:
- De-commissioning of circuit-breaker drive mechanism includes travel curve and dynamic resistance measurement
- Overhaul of hydraulic cylinder
- Replacement of all high-pressure hoses (1)
- Replacement of end-position interlocking unit (2)
- Replacement of hydraulic insertion spanner (3)
- Overhaul of hydraulic cylinder and replacement of sealing kit (4)
- Overhaul of accumulator and replacement of sealing kit (5)
- Overhaul of pressure switch and replacement of rod and guide bush including sealing system (6)
- Replacement of pressure limiting valve (7)
- Replacement of non-return valve (8)
- Replacement of oil filter (9)
- Replacement of pump and corresponding sealing kit (10)
- Replacement of lock screw connections (11)
- Replacement of oil-level tube (12)
- Overhaul of oil tank and replacement of sealing kit (13)
- Replacement of change-over valve 32 (14)
- Replacement of pilot control block (15)
- Replacement of hoses between the phases
- Replacement of oil
- Re-commissioning of circuit-breaker drive mechanism includes travel curve and dynamic resistance measurement

The above data are not limiting values. Additional data will be provided on request. We reserve the right to alter data and technical details without notice.

Fig. 1: Circuit-breaker drive type SN/BBC (exemplary illustration)