Checks to be performed in case of tripping of the motor protective switch type MA7, MA7/8

Technical Instruction MA7_5662550_03_de.docx
Replacing MA7_5662550_02_de.docx

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NOTICE

Safety, hazard and other information included in the MR operating instructions for on-load tap-changers type MA7, MA7/8 must be observed!
Safety information for work performed on electrical systems must be observed!
All work must be carried out by sufficiently qualified personnel!

The instruction describes the checks to be performed when the motor protection trips.

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Checklist tripping of the motor protective switch

1. Motor-drive unit type_____, serial no _____, operation counter reading on the unit_____

2. When was the transformer put into service? Date: _____

3. When did the tripping of the motor protective switch occur, at what time, and how often did the tripping occur since that time?

   _____

   _____

4. Did the tripping of the motor protective switch occur always at the same time or did it occur only sporadically?

   _____

5. In which service position did the tripping of the motor protective switch occur?

   _____

6. Did the tripping of the motor protective switch always occur always in the same position and in both directions?

   _____

7. Did the tripping of the motor protective switch occur at the beginning, during or at the end of a tap-change operation?

   _____

8. Does the motor-drive unit stop before or after the red mark in the green zone on the tap-change indication wheel after completion of a tap-change operation?

   _____

9. Please indicate the ambient temperature of the motor-drive unit: _____°C

10. Compare the tripping range set on the motor protective switch with the data on the motor-drive unit nameplate.
    Value set on the motor protective switch: _____ A

11. How is the arc intensity on the brake contactor K3 and on the motor contactors K1 and K2 during contact opening and closing?

    _____

12. Check the phase sequence at the motor terminals.
    L1, L2, L3 – clockwise Yes ☐ No ☐

Continued on next page

13. Do fluctuations of the motor-drive unit supply voltage occur? Yes ☐ No ☐
    If so, how large are these fluctuations?
    U_{Nenn}: ____ V, U_{max}: _____ V, U_{min}: _____ V

14. Measure the motor voltage (3 phases)
    L1= _____ V, L2= _____ V, L3= _____ V

15. Measure the motor current (3-phases)
    L1= _____ A, L2= _____ A, L3= _____ A

16. Check the step-by-step unit
    a. for breakage or easy movement of the return spring
    b. for correct return of the switching lever after completion of a tap-change operation.

17. Check the opening and closing points of the restart contacts S12 and S14, of the step-by-step contact S13 and oft je other devices according to the flow chart diagram (see the figure below). Enter the opening and closing points that have been determined into the flow chart diagram.

Device \ Step-by-step unit	0	1	2	3	4	5	6	7	8	9	10	.....	24	25	26	27	28	29	30	31	32	33	1
Push-buttons S1 and S2																							
Motor contactors K1 and K2																							
Brake contactor K3																							
Restarting contact S12/S14																							
Step-by-step contact S13																							
Stepping relay K20																							

18. Which control modes are existing for the motor-drive unit? (Local / remote, auto / manual, step-by-step or continuous operation).

    _____

19. During which control did the tripping of the motor switch occur?

    _____

20. Please indicate the time between one control pulse and the next control pulse as well as the pulse duration.

    _____

21. Please send us your diagram for the external connection of the motor-drive unit.

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22. To determine whether the motor protective switch was tripped by the tripping solenoid, connect the tripping coil of another motor protective switch (which must be set to ON) in parallel with the coil of the motor protective switch in question. With this method it is possible to determine whether the motor protective switch was tripped by its tripping solenoid

Please return the completed form to the following e-mail address service@reinhausen.com, your contact person at MR or to:

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