

ELECTRICAL SAFETY AND RELIABILITY AUDIT CHECK LIST
FOR
POWER TRANSFORMERS

TRANSFORMER LOCATION I.D. #: 7A
TRANSFORMER EQUIPMENT I.D. #: KEMR A
VOLTAGE: 2400/480
kVA: 225

UNABLE TO AUDIT
SAND BLASTING IN AREA

CASE ----	Yes	No	N/A
1. Is the transformer properly tagged?	___	___	___
2. Is the manufacturer nameplate in place and legible?	___	___	___
3. Is the transformer case free of any signs of corrosion?	___	___	___
4. Is the transformer case adequately painted?	___	___	___
5. Is the transformer case free of any oil leaks? (Look at case, bushings, radiators, and valve.)	___	___	___
6. Are oil samples taken regularly?	___	___	___
7. Is the transformer adequately grounded? (Must have two leads if its capacity is 1 KVA and above)	___	___	___
8. Has the transformers been checked for PCB's and properly labeled?	___	___	___
9. Are vehicle barricades located if needed?	___	___	___
10. If the transformer has open bushings, is there a fence surrounding the transformer?	___	___	___
11. Are there warning signs posted on the fence?	___	___	___
12. Is the fence grounded?	___	___	___
13. Is the transformer operating free of excessive noise and vibrations?	___	___	___
14. Is the transformer operating below rated capacity?	___	___	___

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G7A-0099-03
18-OCT-1995
PAGE 2 OF 4

- | | | | |
|--|-------|-------|-------|
| 15. Is the transformer located away from process piping? | _____ | _____ | _____ |
| 16. If transformer is within 20 feet (6 meters) of building, is the building wall non-combustible? | _____ | _____ | _____ |
| 17. Is there easy access for fire fighting? | _____ | _____ | _____ |
| 18. Is the transformer bolted to foundation? | _____ | _____ | _____ |
| 19. Is the transformer on a PPM program? | _____ | _____ | _____ |
| 20. Is the transformer maintenance history being kept? | _____ | _____ | _____ |
| 21. Is high resistance ground system in place? | _____ | _____ | _____ |
| 22. Is ground detector system on PPM schedule? | _____ | _____ | _____ |
| 23. Does transformer have a circuit breaker on the primary? (10,000 kVA and above) | _____ | _____ | _____ |
| 24. Is short circuit protection available? | _____ | _____ | _____ |
| 25. Is protective device coordinated with other devices? | _____ | _____ | _____ |
| 26. Is dissolved gas analysis data available? (1000 kVA and above) | _____ | _____ | _____ |
| 27. Is there a dike around the transformer to contain an oil spill? | _____ | _____ | _____ |
| 28. Is there a pit with oil/water separation? | _____ | _____ | _____ |
| 29. Is the pit protected with a fire barrier? | _____ | _____ | _____ |

Case Index Score: _____

RADIATORS

Yes No N/A

- | | | | |
|--|-------|-------|-------|
| 1. Is the transformer radiator free of any signs of corrosion? | _____ | _____ | _____ |
| 2. Is the transformer radiator adequately painted? | _____ | _____ | _____ |

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G7A-0099-03
18-OCT-1995
PAGE 3 OF 4

- | | Yes | No | N/A |
|---|-------|-------|-------|
| 3. Is the transformer radiator free of any oil leaks? (Look at case, bushings, radiators, and valve.) | _____ | _____ | _____ |
| 4. Are the radiators removable with cut-off valves? (2000 kVA and above) | _____ | _____ | _____ |
| 5. Are cooling fans operating properly? | _____ | _____ | _____ |

Radiators Index Score: _____

INSTRUMENTS

- | | Yes | No | N/A |
|---|-------|-------|-------|
| 1. Is the oil level at an acceptable level? | _____ | _____ | _____ |
| 2. Is the oil level gauge in good condition? | _____ | _____ | _____ |
| 3. Is the tank pressure at an acceptable level? | _____ | _____ | _____ |
| 4. Is the tank pressure gauge in good condition? | _____ | _____ | _____ |
| 5. Is the Buchholz Relay in good condition? | _____ | _____ | _____ |
| 6. Is the Sudden Pressure Relay in good condition? (required for 10 MVA and above) | _____ | _____ | _____ |
| 7. Is the Pressure Relief Valve (PRV) in good condition? | _____ | _____ | _____ |
| 8. Is the transformer running at an acceptable temperature? (below 50 degree C rise above ambient) | _____ | _____ | _____ |
| 9. Is the temperature switch and level switch wired to alarm in a continuously occupied location? [LPP 3.7.6] | _____ | _____ | _____ |
| 10. Is the breather system in good condition? | _____ | _____ | _____ |

Instruments Index Score: _____

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G7A-0099-03
18-OCT-1995
PAGE 4 OF 4

BUSHINGS

Yes No N/A

1. Are the exposed bushings clean? _____
2. Is the termination hardware on exposed bushing
clean and without any signs of corrosion? _____
3. Are exposed bushings equipped with lightning
protection devices? _____

Bushings Index Score: _____

CONDUIT/CABLE

Yes No N/A

1. Does cabling enter transformer from bottom or
side only? _____
2. Is cabling or duct anchored to foundation? _____

Conduit Index Score: _____

TAP CHANGER

Yes No N/A

1. Is the tap changer locked or bolted
(and tagged)? _____

Tap Changer ex Score: _____

Power Transformer Average Index Score: _____