

# Transformer Health Assessment Report

## TR-006: Zeta Backup Unit

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### Executive Summary

Parameter	Value
Status	 HEALTHY
Health Score	92/100
Risk Level	Very Low
Scenario	Standby - Excellent Condition

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### Transformer Information

Attribute	Details
Transformer ID	TR-006
Name	Zeta Backup Unit
Location	Eastern Reserve Station
Rating	30 MVA
Voltage	33/11 kV
Age	4 years
Last Maintenance	2025-10-05
Next Scheduled	2026-04-05

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### Current Operating Parameters

#### Temperature Readings (Standby Mode)

- **Top Oil Temperature:** 28°C (Ambient) 
- **Winding Temperature:** 30°C 

- **Current Load:** 0% (Standby)

## Oil Quality Parameters - Excellent

Parameter	Value	Limit	Status
Moisture Content	8 ppm	<25 ppm	<span style="color:green;">✓</span> Excellent
Tan Delta	0.22%	<1.0%	<span style="color:green;">✓</span> Excellent
Breakdown Voltage	72 kV	>50 kV	<span style="color:green;">✓</span> Excellent

## Dissolved Gas Analysis (DGA)

Gas	Concentration	Limit	Status
Hydrogen (H <sub>2</sub> )	25 ppm	<100 ppm	<span style="color:green;">✓</span> Excellent
Methane (CH <sub>4</sub> )	15 ppm	<50 ppm	<span style="color:green;">✓</span> Excellent
Acetylene (C <sub>2</sub> H <sub>2</sub> )	0 ppm	<3 ppm	<span style="color:green;">✓</span> Excellent
Carbon Monoxide (CO)	85 ppm	<300 ppm	<span style="color:green;">✓</span> Excellent
Carbon Dioxide (CO <sub>2</sub> )	650 ppm	<2500 ppm	<span style="color:green;">✓</span> Excellent

## Assessment Summary

**Overall Condition:** Backup transformer in standby mode with minimal usage. All parameters well within limits. Recently commissioned unit (4 years) with excellent oil quality and no signs of degradation.

## Risk Factors

- None identified

## Recommendations

1. Maintain standby readiness procedures
2. Continue quarterly oil sampling
3. Perform annual energization test
4. Verify protection system readiness

**Report Generated:** January 12, 2026

**Classification:** Routine Monitoring - Excellent Condition