

Predictive Maintenance Diagnostic Report

CURRENT STATUS: Estimated Remaining Useful Life is 33.0 cycles. Immediate maintenance is recommended.

1. Input Data Snapshot

Parameter	Value
Cycle Index	1073.0
Discharge Time (s)	855.38
Decrement 3.6-3.4V (s)	198.66666666604576
Max. Voltage Dischar. (V)	3.747
Min. Voltage Charg. (V)	3.731
Time at 4.15V (s)	1024.3130000010133
Time constant current (s)	1592.31
Charging time (s)	7025.81

2. Model Explanation and Key Factor

SHAP Report: SHAP analysis driven by *charging time (s)*.

LIME Report: LIME highlights time at 4.15v (s) as relevant.

Most Influential Feature: charging time (s)

3. Actionable Maintenance Suggestions

- **URGENT:** Isolate the unit and proceed with component replacement or major repair planning.