

# Predictive Maintenance Diagnostic Report

**CURRENT STATUS: HIGH RISK OF MACHINE FAILURE (Confidence: 100.0%)**

## 1. Input Data Snapshot

Parameter	Value
product id	L
air temperature [k]	298.9
process temperature [k]	309.1
rotational speed [rpm]	2861.0
torque [nm]	4.6
tool wear [min]	143.0
type	I

## 2. Model Explanation and Key Factor

SHAP Report: SHAP analysis driven by \*product id L49617\*.

LIME Report: LIME highlights product id\_L51486 as relevant.

**Most Influential Feature: product id L49617**

## 3. Actionable Maintenance Suggestions

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