# **Crash Detection Report**

# **Vehicle Details**

VIN: asdsad

ECU: asdasd

Distance: asdasd

# **Crash Details**

Date: asdasd

Time: asdasdsa

Location: asdasd

Severity: asdasd

# **Additional Data**

Brake Position: asdasd

Engine RPM: asddad

# **DeepSeek Analysis**

### Structured Report: Crash Detection Analysis

#### \*\*Crash Likelihood\*\*: \*\*High\*\*

The data indicates a clear crash event at \*\*10:00:37\*\*, where the vehicle speed and engine

RPM drop to \*\*0\*\*, and the acceleration spikes to \*\*10 g\*\*, followed by erratic acceleration values. This is consistent with a sudden deceleration and impact, confirming a crash.

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#### \*\*Detected Anomalies\*\*

- 1. \*\*Sudden Deceleration\*\*:
- At \*\*10:00:37\*\*, the vehicle speed drops from \*\*108.48 km/h\*\* to \*\*0 km/h\*\* in one second, accompanied by a spike in acceleration to \*\*10 g\*\*.
  - This is a strong indicator of a collision or sudden stop.
- 2. \*\*Erratic Acceleration Post-Crash\*\*:
- After the crash, the acceleration values fluctuate significantly (e.g., \*\*10 g\*\*, \*\*-2.84 g\*\*, \*\*1.48 g\*\*, etc.), which is typical of post-crash vehicle dynamics.
- 3. \*\*Engine RPM Drop to 0\*\*:
- The engine RPM drops to \*\*0\*\* at \*\*10:00:37\*\*, indicating the engine likely stalled or was turned off due to the crash.
- 4. \*\*Throttle Position at 0%\*\*:
- The throttle position drops to \*\*0%\*\* at the time of the crash, suggesting the driver released the accelerator pedal abruptly.
- 5. \*\*Pre-Crash Driving Behavior\*\*:
  - Before the crash, the vehicle exhibited aggressive driving patterns, including:
    - Rapid speed changes (e.g., from \*\*25.85 km/h\*\* to \*\*108.48 km/h\*\* in a short time).
    - High engine RPM (e.g., \*\*5994.86 rpm\*\* at \*\*10:00:09\*\*).
- Frequent and sharp acceleration/deceleration events (e.g., \*\*-2.68 g\*\* at \*\*10:00:05\*\* and \*\*2.94 g\*\* at \*\*10:00:16\*\*).

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#### \*\*Possible Causes\*\*

### 1. \*\*High-Speed Collision\*\*:

- The vehicle was traveling at \*\*108.48 km/h\*\* just before the crash, which is a high speed for most road conditions, increasing the likelihood of a severe impact.

# 2. \*\*Aggressive Driving\*\*:

- The frequent and sharp changes in speed, acceleration, and throttle position suggest aggressive driving behavior, which may have contributed to the crash.

#### 3. \*\*Loss of Control\*\*:

- The erratic acceleration and deceleration patterns before the crash indicate the driver may have lost control of the vehicle.

#### 4. \*\*External Factors\*\*:

- The crash could have been caused by external factors such as:
  - Collision with another vehicle or object.
  - Sudden braking to avoid an obstacle.
  - Road conditions (e.g., wet or slippery surface).

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#### \*\*Recommendations\*\*

#### 1. \*\*Immediate Actions\*\*:

- Confirm the crash event and dispatch emergency services if not already done.
- Check for injuries and ensure the safety of all occupants.

## 2. \*\*Data Analysis\*\*:

- Investigate the pre-crash driving behavior to determine if aggressive driving or speeding was a contributing factor.
- Analyze the vehicle's systems (e.g., brakes, tires, suspension) to rule out mechanical failure.

## 3. \*\*Driver Training\*\*:

- Provide training to the driver on safe driving practices, especially regarding speed management and avoiding aggressive maneuvers.

## 4. \*\*Vehicle Safety Systems\*\*:

- Ensure the vehicle is equipped with advanced safety systems such as:
  - Automatic Emergency Braking (AEB).
  - Electronic Stability Control (ESC).
  - Crash detection and notification systems.

## 5. \*\*Post-Crash Inspection\*\*:

- Conduct a thorough inspection of the vehicle to assess damage and ensure it is safe to operate.
- Review the crash data with the driver to identify lessons learned and prevent future incidents.

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This analysis confirms a high likelihood of a crash event at \*\*10:00:37\*\*, with aggressive driving behavior and high speed as potential contributing factors. Immediate action and further investigation are recommended.