Crash Detection Report

Structured Report: Crash Detection Analysis

Crash Likelihood: **Low**

The provided OBD data does not indicate any significant anomalies or patterns that suggest an imminent crash. The vehicle's parameters, such as speed, acceleration, and engine performance, appear to be within normal operating ranges. However, the data shows a gradual increase in speed and acceleration, which could lead to risky driving behavior if not monitored.

Detected Anomalies

1. **Negative Instant Fuel Consumption**: Starting at `10:35:E`, the "Calculated instant fuel consumption (km/L)" values become negative, which is physically impossible. This could indicate a sensor malfunction or data corruption.

2. **High Vehicle Acceleration**: The "Acceleration(g)" values increase steadily from `0.2g` to `5.6g`. While not extreme, sustained high acceleration could indicate aggressive driving behavior.
3. **Increasing Engine RPM**: Engine RPM increases from `2500 rpm` to `29500 rpm`, which is unusually high for most vehicles. This could indicate either a data error or an engine operating at its maximum capacity, which is not sustainable.
4. **Throttle Position at 100%**: The throttle position remains at 100% throughout the dataset, which is unusual for normal driving conditions and could indicate aggressive driving or a malfunctioning throttle sensor.

Possible Causes

1. **Sensor Malfunction**: The negative fuel consumption values and unusually high RPMs suggest potential sensor or data transmission issues.
2. **Aggressive Driving Behavior**: The increasing acceleration, throttle position at 100%, and increasing speed could indicate aggressive or reckless driving.
3. **Data Corruption**: The presence of physically impossible values (e.g., negative fuel consumption, extremely high RPMs) suggests potential data corruption or transmission errors.

Recommendations

1. **Inspect Sensors and OBD System**: Check the fuel consumption sensor, throttle position sensor, and RPM sensor for malfunctions or calibration issues. Ensure the OBD system is functioning correctly.
2. **Monitor Driving Behavior**: If aggressive driving behavior is confirmed, advise the driver to avoid aggressive acceleration and maintain safe speeds.
3. **Verify Data Integrity**: Investigate the source of the data to rule out corruption or transmission errors. Ensure the

OBD system is properly connected and transmitting accurate data.

4. **Conduct Vehicle Diagnostics**: Perform a vehicle diagnostic check on the vehicle to identify any underlying mechanical or electrical issues that could explain the anomalies.

5. **Driver Training**: If aggressive driving is confirmed, consider providing the driver with training on safe driving practices to reduce the risk of accidents.

This analysis suggests no immediate crash risk, but the anomalies and trends warrant further investigation to ensure vehicle safety and data accuracy.