ACCIDENT REPORT

Youngstown Autonomous Vehicle Pilot Program

Incident Involving Autonomous Ford eTransit

1. Incident Summary

Date and Time: April 17, 2025, at 10:36 AM

Location: Federal Street, between Symphony Place and Hazel Street, Youngstown, Ohio

Vehicle Involved:

- Make/Model: 2023 Ford eTransit
- Autonomy System: Perrone Robotics “TONY” (To Navigate You) Kit
- Vehicle Identification Number (VIN): 1FTBW9CK2PKA78786

Personnel Onboard:

- Safety Operator (Driver’s Seat): Amanda Quartermaine
- Passenger (Front Seat): Nicole Trontel

2. Description of Incident

The autonomous vehicle (AV) was operating on a mapped AV mission along Federal Street when it made contact with a parked vehicle. The AV's passenger-side outrigger sensor mount struck the driver-side rearview mirror of a car legally parked on the right-hand side of the street.

Upon contact, the safety operator, Amanda Quartermaine, immediately engaged the Auto Manual Button (AMB) to initiate a Manual Takeover (MTO) and safely maneuvered the AV off the main roadway to avoid obstructing traffic.

Supervisor Les Sundra Ford was promptly notified of the incident. The Youngstown Police Department was also contacted and responded to the scene. A formal police report was filed.

3. Analysis and Findings

- • The AV deviated from its mapped route and was traveling too far to the right side of the lane at the time of the incident.
- • The parked vehicle was outside the AV’s designated map path and therefore not detected by the AV’s Obstacle Detection and Obstacle Avoidance (ODOA) system.
- • The point of contact occurred at the AV’s passenger-side outrigger sensor mount, which was the furthest protruding component on that side.

- • Post-incident diagnostics determined that the deviation was caused by a misalignment in the AV's steering calibration upon system startup.

4. Corrective and Mitigating Actions

To address the root cause and mitigate the risk of recurrence, the following steps are being implemented by Perrone Robotics Inc. (PRI):

- • Steering Calibration Fix: A direct integration into the vehicle's CAN steering interface will be established to ensure consistent and accurate steering alignment at startup.
- • Safety System Upgrade: Implementation of a Built-in Safety Check (BISC) system that will automatically terminate the AV mission and return control to the human operator if Off-Track Distance (OTD) exceeds a predefined threshold.
- • Training Enhancement: Operator training and documentation will be updated to emphasize MTO protocol in cases where the AV pathing appears abnormal or uncertain. Operators will be instructed to engage manual control immediately when encountering unexpected AV behavior or potential obstacles outside of the AV's detection range.

5. Conclusion

The incident was minor in nature with no injuries and limited damage reported. However, the findings underscore the importance of robust startup calibration, improved operator protocols, and safety systems that monitor path adherence. PRI is actively addressing all identified issues and enhancing both technical systems and operator procedures to prevent similar events in the future.

Prepared By:
Perrone Robotics Inc. (PRI)

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