

Mobile Computer Use Case: Car Service

Initial Situation

Tire service centers and fleet operators of passenger and commercial vehicles face the same challenge: they need to reliably capture tire tread depth – workshops, to decide whether a customer's vehicle needs new tires, and technicians at rental or delivery fleets, to determine the right time for a tire change. Both workflows also require capturing extensive vehicle-related data such as the vehicle identification number (VIN) and tire identification number (TIN).

Manual data capture on paper or via keyboard is slow and error-prone – this affects productivity, data quality and road safety. Traditional mechanical tread depth gauges produce inconsistent results due to differences in handling, and digital probes require regular calibration.

Without Automation



Manual data capture on paper or via keyboard – slow and error-prone



Inconsistent readings from mechanical tread depth gauges



Digital probes require regular calibration



Additional capture of VIN, TIN & other vehicle data required

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Solution

The entire workflow can now be automated with the **Zebra Tread Intel** solution: it combines the rugged **Zebra TC78** or **TC58e** mobile computers with the snap-on **Tread Intel accessory**. Paired with Zebra's OCR*-software (Mobility DNA OCR Wedge and Free-Form OCR), plus the integrated barcode scanner and high-resolution camera, just a few simple scans capture all the relevant data in seconds – from tread depth to license plates, VIN, TIN and identification documents. Integration into existing applications is fast via Android Intents, with no need for complex SDK development.



Measure tread depth

Accurate to 1/32 in. (0.79 mm) in under 5 sec. per tire



Scan barcodes

Enterprise-grade scanner for virtually any barcode



VIN & license plate

OCR Wedge recognizes VIN, TIN & license plates (US/EU)



ID documents

Capture driver's licenses, national ID & customer cards



Capture a photo

Photograph damage, tire condition or documents

* Optical Character Recognition

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The Challenge: Speed and Accuracy in Tire Inspection

Especially during periods of high vehicle throughput, it's essential to capture tread depth and vehicle data quickly, clearly and without errors. Delays caused by manual notes, hard-to-read tire markings or inconsistent measuring techniques should be avoided. Zebra's integrated OCR and laser measurement technology ensures data is captured reliably, minimizing misreads and unintentional operating errors by service staff.

Hardware and Software Setup

The rugged **Zebra TC78** or **TC58e**, fitted with the **Tread Intel snap-on accessory** and Zebra's Mobility DNA OCR software, serves as the central device. The system supports both a US mode for capturing DOT data and an international universal mode – tuned to capture low-contrast data and curved text, even upside down. The solution is built for continuous professional use and integrates seamlessly into existing workshop and fleet systems via Android Intents.



Zebra TC78 / TC58e with Tread Intel snap-on accessory

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Results and Benefits

With the Zebra Tread Intel solution, staff capture tread depth, vehicle and tire data automatically, quickly and accurately – manual data entry is eliminated. The result: greater vehicle safety, higher productivity, lower fuel consumption and reduced tire replacement costs. Ultimately, it all comes down to speed, accuracy and a better customer experience.



**Vehicle &
Driver Safety**



**Shorter
Wait Times**



**Higher
Productivity**



**Lower
Replacement
Costs**



**Ensured
Compliance**



Your Advanced Systems team is here to support you with the development and integration of powerful Zebra solutions for tire service and fleet management. Let's work together — we're here for you!