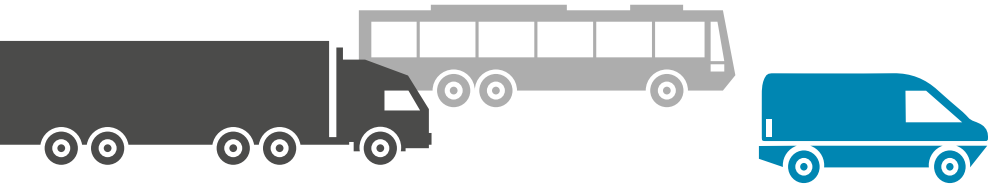# Smart Tachograph DTCO® 4.1a for Fleets

Well equipped for Europe

Like its predecessor, the DTCO 4.1a is essential for improved documentation of driver post-ings and cabotage trips. To achieve this, it uses data from the European satellite navigation system Galileo. The vehicle's position and border crossings are automatically detected and recorded in the mass memory via an enhanced GNSS (Global Navigation Satellite System) module. The official authentication of this data via OSNMA (Open Service Navigation Message Authentication) will make this data even more secure and reliable in the future. The DTCO 4.1a is the first industrial application to offer **secure GNSS functionality from a European source**.

The smart tachograph (V2) retrofit over time

Since August 21, 2023

All newly registered vehicles with a gross vehicle weight of more than 3.5 tons must be equipped with version 2 smart tachographs (DTCO 4.1).

By December 31, 2024

The old analog/digital tacho-graphs (up to and including DTCO 3.0) must be replaced by the DTCO 4.1 in all vehicles used in cross-border transport with a permissible total weight of more than 3.5 tons.

By August 19, 2025

Vehicles in cross-border traffic with a gross vehicle weight of more than 3.5 tons and a smart tachograph of the 1st version (DTCO 4.0 or 4.0e) must be retrofitted with the DTCO 4.1 or 4.1a (including OSNMA-authenticated position data).

From July 1, 2026

Commercial vehicles with a permissible total weight of more than 2.5 tons that are used in cross-border traffic must also be equipped with a smart tachograph of the 2nd version, DTCO 4.1a.

GNSS

/ Position authentication via Galileo OSNMA
/ Automatic detection and recording of border crossings
/ Manual position entry for loading and unloading operations
/ Automatic position recording every 3 hours (cumulative)

Bluetooth® functionality

/ Download and control the tachograph via external devices or smartphone (e.g. manual entry and display of VDO Counter in conjunction with the VDO Fleet App)
/ Download tachograph data via Bluetooth® (local and remote download of mass memory and driver card data supported)
/ More freedom for app developers
/ In-vehicle Bluetooth® available: direct connection between tachograph and other Bluetooth-based devices (e.g. in-vehicle control terminal)
/ Bluetooth® App VDO Fleet for IOS/Android

Tooling

/ EETS*-ready with VDO Link (*European Electronic Toll Service)

General maintenance

/ Cybersecurity updates
/ Other maintenance for improvements and new features

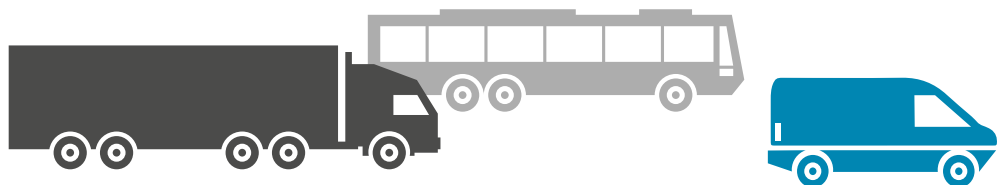**Find a Partner Workshop now**
www.fleet.vdo.com/partnerfinder/

VDO

Smart Tachograph DTCO® 4.1a for Workshops

What workshops can expect now

The implementation of the EU Mobility Package and the introduction of the second version of the smart tachograph is progressing across Europe. Workshops should also be prepared for the next deadlines.

Implementation Timeline for the Smart Tachograph (V2)

Since August 21, 2023

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The old analog/digital tacho-graphs (up to and including DTCO 3.0) must be replaced by the DTCO 4.1 in all vehicles used in cross-border transport with a permissible total weight of more than 3.5 tons.

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From July 1, 2026

Commercial vehicles with a permissible total weight of more than 2.5 tons that are used in cross-border traffic must also be equipped with a smart tachograph of the 2nd version, DTCO 4.1a. The installation situation in smaller vehicles is a challenge, but also offers great potential as a new customer group.

Our training courses:

Since 2023, we have been offering special expert training courses via our training portal to comprehensively prepare workshop personnel for the changes. The training courses will be continuously expanded, e.g. with training for the planned software update from summer 2025 that will provide the new functions of the DTCO 4.1a also for the DTCO 4.1.

Retrofit

1. Analog and Appendix 1B ➔ DTCO® 4.1a: Replace tachographs and KITAS, install a DSRC antenna

2. DTCO® 4.0 ➔ DTCO® 4.1a: Replace the tachograph and KITAS

Regular software updates available

With the introduction of the DTCO 4.1a, regular software updates as part of the periodic tachograph inspection ensure several important advantages:

Legal compliance
Legally compliant on the basis of the latest tachograph regulations, e.g. card updates, social regulations etc.

Latest functions
The latest DTCO version with all functionalities, incl. maintenance, e.g. Bluetooth features.

Quality
Compliance with EU quality standards

Security
Cybersecurity according to the latest technology

GNSS
/ The DTCO® 4.1a offers a secure position determination using the OSNMA-authenticated Galileo data
/ Additional verification of the signal authentication

Internal independent motion sensor
/ Testing of an additional internal motion sensor
/ Interpreting new motion errors

Bluetooth® functionality
/ Download and control the tachograph via external devices or smartphone (e.g. manual entry and display of VDO Counter in conjunction with the VDO Fleet App)
/ Download tachograph data via Bluetooth® (local and remote download of mass memory and driver card data supported)
/ More freedom for app developers
/ In-vehicle Bluetooth® available: direct connection between tachograph and other Bluetooth-based devices (e.g. in-vehicle control terminal)
/ Bluetooth® App VDO Fleet for IOS/Android

Suitable for new Gen2v2 workshop cards
/ Larger storage capacity on the card
/ Downward compatible

Retrofitting with peace of mind
/ Suitable replacement devices (DTCO® 4.1a and KITAS) can be easily and reliably found with the VDO WorkshopTab 2
/ VDO system monitors each step of the calibration
/ spare parts can be ordered for retrofitting

More information:
www.workshop.vdo.com

VDO