

Adaptation of the CTU – Conformity Test Unit (446 310 010 0)

WABCO has supplied this measuring device for testing the response time as well as compliance with the statutory regulations for commercial vehicles with compressed air and electronic brakes in accordance with ECE R13 requirements since 2002.

New requirements in ECE R13 (supplement 8 for amendment series 11) and ISO 11992 made extensive adaptations of the CTU (part of the basic package 446 310 010 0) necessary.

From **July 2012** onwards, WABCO will supply only this adapted version of the CTU.

Alternatively, devices already in circulation can be updated by carrying out a software and hardware **update which is subject to charge**. Please ask your WABCO representative about the applicable rates.

Use of the CTU without the update for tests according to ECE R13 Annex 17, is **no longer permitted!**

Overview of technical changes for ECE R13 and ISO 11992

Existing test procedures have been changed and new test sequences added. The changes relate to the following tests:

1. **Annex 7 Section A.1.2. / Towing vehicle pressure reservoir**
Capacity test for all installed supply pressure reservoirs
2. **Annex 7 Section A.1.3. / Trailer pressure reservoir**
Capacity test
3. **Annex 17 Section 3 / Compatibility test for the electrical control line (CAN) between towing vehicle and trailer**
Extension of the CTU PC program:
 - Annex 17 Section 3.2.2.4. "Venting and supply line requirements".
 - Annex 17 Section 3.2.2.5. "Response time" incl. Annex 6 Section 2.
 - Annex 17 Section 3.2.2.6. "Control of the brake lights in the towing vehicle from the trailer".
 - Annex 17 Section 3.2.2.7. "Indication of an intervention of the Trailer Stability Function".
4. **Annex 17 Section 4 / Compatibility test of the trailer according to ISO 11992**
Extension of the CTU PC program.
 - Annex 17 Section 4.2.2.1.2. Automatic braking of trailer vehicles equipped with only an electrical control line when hitched to a towing vehicle without dual circuit acquisition of the electrical brake signal.
 - Annex 17 Section 4.2.2.1.3. Requirements relating to the towing vehicle venting the supply line when a trailer without pneumatic control line has less than 30% braking force due to a fault.
 - Annex 17 Section 4.2.2.3. "Response time" incl. Annex 6 Section 3.
 - Annex 17 Section 4.2.2.4. Transmitting the "Automatic brake intervention" parameter to the towing vehicle when the trailer independently brakes at more than 0.7 m/s².
 - Annex 17 Section 4.2.2.5. Transmitting the "Vehicle stability function intervention" parameter".
 - Annex 17 Section 4.2.2.6. Transmitting the "Support of the electric control line".

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- Simulation of all ISO 11992 messages, including RGE messages (i.e. also control of ECAS functions), in the trailer via the CAN bus).

The new parameters in ISO 11992 have been included in the test according to ECE R13 Annex 17.

Features of the new CTU

- New user interface
- Dialogues optimised for fast completion of tests
- Clearly structured test protocols, incl. time measurement
- Test diagrams displayed in colour
- Creation of a test protocol

Technical background

Besides verifying that legal requirements are met, various simulations and a test of the CAN messages according to ISO 11992 can also be carried out.

The CTU is used to test the behaviour of the electronic brakes in towing vehicle and the trailer as well as the compatibility according to ISO 11992 of CAN messages on the 7-pin ISO 7638 connector.

Various simulations of CAN messages make it possible to influence the vehicle's braking system.

Note regarding the CTU-UPDATE subject to charge

For users of CTUs that do not yet comply with the current legal requirements, WABCO offers an interesting software and hardware update that, apart from the new features, includes:

- Test/Disassembly/Reworking of the housing
- Firmware update
- USB-RS232 adapter for a connection to modern PC ports
- CTU PC software 2.0

If you use the TOWING VEHICLE extension package (446 310 013 0), you will also receive an additional test volume (500ml container, incl. hose).

As previously, calibration and repair is carried out by IMO:

imo elektronik GmbH
Update-Service
Edisonstr. 19
D -33689 Bielefeld

Tel. +49 5205 9108-0
Fax: +49 5205 9108-12
Email: update@imo-elektronik.de

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The ordering process

- Send an order to IMO.
- **Please state whether or not you also wish to acquire an update for the towing vehicle package (yes/no) and a recalibration* (yes/no)!**
- IMO will send you a tracking number and a pro forma invoice.
- Send the CTU (446 310 000 0, the control unit only, if calibration is required, the pressure sensors as well but no cables and other accessories) to IMO.
- Please pay the invoice – by advance payment.
- If applicable, include instructions as to which transport company should be used (e.g. by stating the customer number to be used).
- After the receipt of payment, the update is carried out and the updated CTO (incl. the new test volume in the case of towing vehicle) is shipped back to you.

*** Attention!**

Carrying out a calibration at the same time might be sensible if the next inspection data is due soon. If a calibration is to be carried out, all pressure sensors must be sent along with the CTU.