



Brake inspection

Brake inspections in the field or at a workshop



A detailed and safe brake inspection is vital in order to get rolling stock serviced in the field quickly back into service again. Euromaint Rail carries out brake inspections on site using modern, effective equipment. This saves both time and money for our customers.

Unique solution for rapid, safe brake inspections

Euromaint Rail has developed effective, automated equipment for technical brake inspections for freight wagons. The inspections can be carried out at a workshop or in the field, including in connection with wheel replacements or turning. Without an investigation that the brakes are working properly, a wagon can not be taken back into service again.

The brake inspection is one prerequisite for being able to rectify wheel-related damage trackside. For our customers within freight transport, this means substantial savings, as they avoid the need for costly reloading, replacement transport and delays.

The brake inspection is carried out following the completion of wheel replacements or repairs of wheel damages. In connection with the brake inspection, a protocol is generated, which is sent to a server wirelessly. The documentation is saved and the protocol can be opened at any time to verify the inspection results. Once the brake inspection is complete, the wagon can be placed back in service immediately.

Brake inspections are carried out in the field or be undertaken in connection with planned maintenance at any one of Euromaint Rail's workshops.

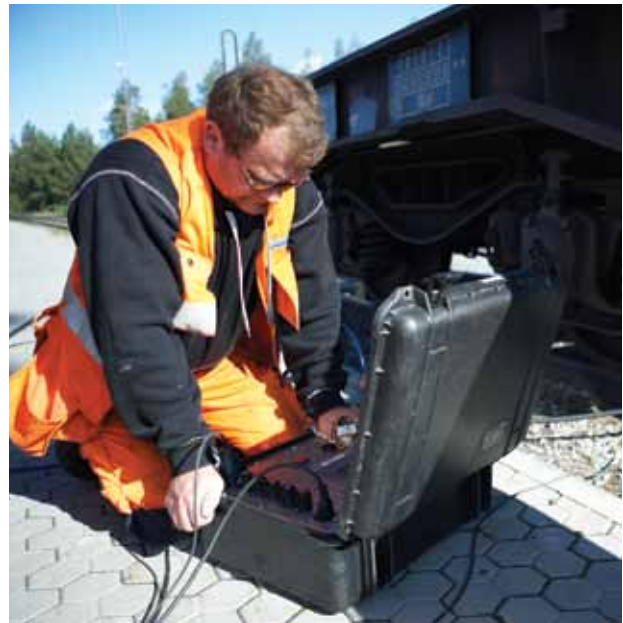
Clamping force measurement saves time

One alternative to traditional pressure measurement is so called "clamping force measurement" – a unique and time-saving way of carrying out brake inspections during corrective maintenance. By testing the clamping force of the brakes directly against the wheel, service personnel avoid the time-consuming work involved in accessing the connection points under the wagon.

Customised and complete brake inspections

EuroMaint Rail's brake inspections are adapted to the needs of the wagon and the customer's requests. Complete brake inspections are carried out as a planned, preventive measure. In connection with, for example, a fault in the brake system or other damage to the wagon that may affect the brake system, customised brake inspections are carried out.

A complete brake inspection involves a careful review of the status of the brakes and their functionality. Inspections and fun-



ction verifications of all mechanical and pneumatic equipment are carried out, and include the following elements:

- Inspection of all mechanical and pneumatic parts
- Check of the brake system's seals
- Check of the load compensation during braking
- Functional tests of all pneumatic control functions and pressure
- Function verifications of the mechanical systems, such as adjustment of brake wear, etc.

For operators and wagon owners with their own maintenance organisation

Euromaint Rail also offer the brake inspection equipment as a standalone product. The equipment is available in two versions, for use in the field or for use in a workshop.

Would you like to know more?

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Read more about brake inspections at www.euromaint.com

Technical description

Functionality

Overview

Two different methods, traditional brake inspection and clamping force measurement.

- Traditional brake inspections based on C/T pressure measurement
- Clamping force measurement, as a supplement, saves time and simplifies tests in difficult conditions (e.g. winter time in the field)
- Automated tests make brake inspections more efficient and reduce the number of stages performed manually

Automated tests of (general):

- main line flow
- LH3/Ackermann
- pressure tightness of Main line
- pressure tightness of Feed line
- R pressure
- brake regulator and brake movement

Automated tests and measurements of (clamping force- or C/T pressure measurement):

	C/T pressure measurement	Clamping force measurement
control valve (gradual brake/release, brake sensitivity, release sensitivity, brake insensitivity, release device)	X	X
pressure tightness of C/Cv brake cylinder	X	X
brake and release times, as well as max. C pressure	X	-
brake force with/without load	-	X ¹
load converter	X	- ¹
variable load relays	X	- ¹
variable load relay valves (by T- pressure simulation/manual loading of exhaust valve)	X	- ¹

¹= A test using clamping force measurement of the brake force replaces the tests of load converter, variable load relays and load relay valves

Connections and sensors

- C, T, R, FL and ML pressure. The equipment has connections for a total of five pressure sensors that allow testing on all common braking systems, for example 4 C pressure, 2 T pressure, etc.
- Clamping force measurement

Other

- Test results for all completed measurements are saved and accessible by the operator
- Acceptance criteria as per maintenance rules
- Option for manual control of brake/main line
- Blow- cleaning of the dust collector

Options

- Workshop version:
 - A wagon based brake inspection unit with integrated hose and cable reels for better ease of use in the workshop
- Electronic records with wireless transfer:
 - Software is included and supports automatic export of protocols to .pdf-format
 - Supports input of e.g. freight wagon number (using check digit), customer order number and damage code
 - The operator's identity is entered for each partial test and for the final approval/disapproval
- Remote control for activation of automatic tests and manual control of brake
- Extra pressure sensor

Technical Data

Power supply

- 230 V, 2 A

Pneumatic supply

- Feed pressure: 6.5-8 bar
- Air consumption: max. 800 NI/min (instantaneous)

Temperature and atmospheric humidity

- The equipment is intended for temperatures between -30 to +40 °C and atmospheric humidity of between 30 to 60% relative humidity (φ)

Noise emission

- The sound pressure level of the equipment does not exceed 70 dB (A), within the work area

Calibration

- The equipment is CE-marked and calibrated by an authorised party

Dimensions and weight

- Dimensions (cm): 52.5 x 43.7 x 21.7
- Weight: 18 kg
- Accessories box (cm): 55 x 25 x 25
- Weight: 25 kg

Euromaint offers qualified technical maintenance to meet customer requirements for well-functioning rolling stock fleets. The company's products and services guarantee the reliability and service life of track-mounted vehicles such as freight carriages, passenger trains, locomotives and work machines.

