

USER MANUAL

CAP9010

CAP9020

Roller Brake Tester



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I. GENERAL INSTRUCTIONS



**PLEASE READ CAREFULLY BEFORE COMMISSIONING
OR BEFORE USING THE EQUIPMENT FOR THE FIRST TIME**

General safety instructions

The CAP9010 or CAP9020 is a machine in the sense of Directive 2006/42/EC. This machine can generate dangers that can be sources of injury or health issues. These dangers have been taken into account in the machine design. However, some dangers cannot be completely controlled and are the subject of the safety instructions below which are to be followed strictly.

Do not use the bench without first having been trained by a qualified member of CAPELEC staff on the equipment specifications, the dangers it represents and how to use it.

Before starting to use the equipment without surveillance, make sure to have perfectly understood how it works and that all the following instructions have been followed.

INFORMATION:

A brake tester does not need to be installed on or near an inspection pit. If the user wishes to use the brake tester over an inspection kit, all required measures must be taken to protect persons from access to the tester from the pit.

Before commissioning it is essential to:

- Correctly understand what is described in this manual and to be aware of the capacities, specifications and dangers of the equipment.
- Make sure all possible operatives are perfectly trained and that they know how to use the equipment safely.
- Make sure that safety instructions are strictly followed to prevent non-authorized persons from approaching the safety zone.
- Make sure that the layout is compliant with the civil engineering drawings and compliant with all applicable regulations. For the civil engineering definition, the safety zones and the safety device layouts, only use the layout drawings.
- Mark the safety zone on the ground (0.5 m wide, yellow and black stripes, completely surrounding the embedded equipment).
- Depending on the site, plan for the installation of:

- side barriers preventing access to the test bench,
 - spherical surveillance mirrors visible from the control stations,
 - additional systems to protect all persons likely to access the installation,
 - an exhaust fume evacuation system.
- Use all required personal protection equipment,
- Never carry out work on the equipment (servicing, repairs, checks, movement, etc.) without first having powered it off,
- Carry out the regular servicing as described in the maintenance manual,
- Position the console so that the operative can always read the control screen regardless of outside lighting conditions,
- Check that the screen is sufficiently legible at the maximum distance between the operative and the screen (depending on the type and length of the vehicle). If this is not the case install an active repeater screen in a suitable location to meet this requirement,
- Always keep this manual within reach and remember to consult it whenever necessary.



As soon as a vehicle axle is in position on the brake tester bench, its rollers can be started up and become dangerous elements. It is therefore imperative to take all required precautions to prevent any persons from accessing the safety zone, especially in the inspection pit, when a vehicle is being tested.


Similarly, when a vehicle is being tested and depending on the brake circuit and the type of test being carried out, the front axle wheel can block. In some cases, this can lead to the unplanned reversal of the vehicle. Consequently, permanent monitoring of the safety zone is required to check that nobody is standing behind the vehicle.

The installation of an approved safety system preventing access to the rollers as much as possible may be required by the regulations applicable at the installation site. If this is not the case such a system can be installed on request from the owner.

The manufacturer declines all liabilities in the event of alterations likely to cause damage or accidents made to any of the equipment. This especially includes the prohibited deterioration, disabling or removal of safety or protective devices.

The test bench has been designed to test vehicles of an authorised size and weight. Any other use not described in the user manual is prohibited.

Content of the EU Declaration of Conformity

| | | |
|---|--|------------|
| | | DQ-ETU-019 |
| DECLARATION UE DE CONFORMITE / EU DECLARATION OF CONFORMITY | | |
| Equipement : <i>Product:</i> | <ul style="list-style-type: none"> • CAP9000 • CAP9010 • CAP9020 | |
| Fabricant: <i>Manufacturer:</i> | CAPELEC 1130 rue des Marels 34000 Montpellier FRANCE | |
| La présente déclaration de conformité est établie sous la seule responsabilité du fabricant <i>This declaration of conformity is issued under the sole responsibility of the manufacturer.</i> | | |
| Objet de la déclaration : <i>Object of the declaration :</i> | <ul style="list-style-type: none"> • CAP9000 • CAP9010 • CAP9020 | |
| L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable <i>The object of the declaration described above is in conformity with the relevant Union harmonization legislation</i> | | |
| DIRECTIVE COMPATIBILITE ELECTROMAGNETIQUE <i>ELECTROMAGNETIC COMPATIBILITY DIRECTIVE</i> 2014/30/UE (2004/108/EC) | | |
| DIRECTIVE BASSE TENSION <i>LOW VOLTAGE DIRECTIVE</i> Directive 2014/35/UE (2006/95/EC) | | |
| Références des normes harmonisées <i>References to the relevant harmonized standards used</i> | | |
| EN61010-1 :2011 EN301-489-17 :2012 EN61326-1 :2013 EN61000-3-3 :2014 EN61000-3-2 :2014 | | |
| Signature du fabricant : Fabricant signature: CAPELEC 1130 rue des marels 34000 Montpellier FRANCE | MONTPELLIER le 12/07/2019  Thierry COTON Gérant / General Manager | |
| | | |
| www.capelec.fr | | |
| 1130, rue des Marels, 34000 MONTPELLIER - FRANCE Tél. : +(33)0 467 156 156 Fax : +(33)0 467 224 224 Mail : contact@capelec.fr Capital Social : 680 000 euros - SIRET : 38162297600037 - APE: 2651B - R.C.S Montpellier B 381 622976 - T.V.A. n° FR 56 381 622 976 Banques : Société Marseillaise de Crédit (SMC) - IBAN : FR76 3007 7048 2310 0903 0020 053 - BIC : SMCTFR2AXXX Banque Nationale de Paris (BNP) - IBAN FR76 3000 4006 4000 0103 3084 686 - BIC : BNPAFRPPXXX | | |

Handling and installation instructions

Remember that during all loading, unloading, handling, installation, assembly or dismantling operations on the equipment the operators must take all necessary precautions under workplace accident prevention rules (hard hat, gloves, safety footwear, etc.) defined by applicable regulations.

Packaged equipment must be handled using equipment suitable for lifting and moving pallets. Unpacked equipment must be handled and installed by CAPELEC trained qualified technicians.

The chassis are fitted with lifting rings and are delivered on pallets. Their installation over an inspection pit must be carried out using a sling with chains attached to the 4 lifting rings screwed onto each chassis. Once installed over an inspection pit they are completely embedded and cannot be moved.

Instructions for the electric installation

Remark: The wiring diagrams required to service the equipment are not supplied because these servicing and repair operations should only be carried out by CAPELEC qualified staff. These persons have all the required documentation.

General case: 230/400 V 50Hz electricity supply:

To connect the consoles and repeater screen (optional) install a single phase 230 volts 10% 50 Hz, 16 A electricity supply + Ground fitted with a protection compliant with applicable regulations.

- To connect the electric motors, install a 3 phase, 400 volts, 50 Hz (30 A for light vehicles) + Ground fitted with a protection compliant with applicable regulations.

For any other power supply voltage: the specifications of the electricity lines and protection to be installed are defined on the layout drawings. Any electricity supply different from that described above must be notified when ordering the equipment.

- Fix the electric box over the cable input opening. An unfixing console can cause the electric wiring to be damaged and create an electrocution hazard.

- It is mandatory to pass electricity supply cables through the buried sheaths recommended on the layout drawings and they should be protected from any risk of being damaged (such as being crushed, cut or ripped out).

- The embedded electric ducts for the consoles must arrive in the ducts over which the consoles are placed so that no cables are apparent from the outside.

- The cables must be protected and the inspection pit cleaned if liquid (water, oil, fuel, etc.) leaks from a vehicle and comes into contact with the cables.

- If the inspection pit has no water drainage (for example due to water table issues), in wet or snowy weather take the required precautions to prevent water or snow from running or falling off vehicles into the test benches. In the event of heavy rain, prevent the benches from being flooded. Do not allow an inspection pit to fill.

- Special case of low voltage cables for measurement circuits, printer and computer connections, etc.:

- These cables must be installed in cable raceways separate from the power cables.

- The measurement cable sheaths must be more than 0.5 m from the power supply cables for other machines as these can be the cause of parasites: compressors, motors of several HP, arc welding equipment, etc.
- Avoid having a magnetic field close to the console and the magnetic readers (diskettes, hard drives, etc.) as this could damage data or the application programme.
- Similarly, a very high voltage power line less than 50 m from the premises or a high-power radio emitter could possibly disrupt the computers or the measurement equipment.

Other precautions and instructions to follow

Use of the remote control:

- In order to guarantee the correct operation of the remote control, all infrared sources other than those from CAPELEC equipment must be avoided (such as alarms, vehicle remote controls, etc.), as must all neon's at less than 2.5 m from the infrared sensors.

Computer risk prevention, precautionary rules and handling rules:

The supplied computer equipment has been configured for professional use.

It is prohibited:

- To shut down the PC using the console power switch, the PC must be shut down using the described programme shut down procedure.
- To modify the BIOS.
- To add components to the PC such as RAM, cards etc. ...
- To change Windows configuration settings,
- To install software that is not related to MOTs,
- To connect removable media such as USB flash memory, ... that have not been certified by CAPELEC,

Console protection

- Protect the console and the printer from any water, oil or other liquid spray as well as from any dust-laden atmospheres. If necessary, use a protective cover when the appliance is not in use.
- Protect the console and its components from heating due to direct exposure to heat sources (sunlight, radiant heating, etc.)

Priority stop devices

The bench is fitted with several priorities stop devices:

- The "ESC" key on the software keyboard,
- The red "ESC" button on the remote control. We recommend that the operator in charge of ongoing tests has an operational remote control (regularly check the state of the battery) as this is a remote priority stop device.
Warning: the remote control infrared beam is directional.

- Note: the "ESC" key on the remote control is permanently operational, even if the test operations are conducted from the console.

Emergency stop devices

The bench is equipped with an emergency stop device:

- The main power switch on the side of the console completely cuts the single and three phase power supplies to the console.

Precautions for vehicles checked on the brake tester



Warning: before testing a vehicle on the brake testing bench it is imperative to:

- Check the cleanliness of the tyre treads, wash off mud that could alter measurement quality by reducing adherence, and remove any objects jammed in the treads that could damage the roller surface coating.

- After eventual cleaning look for traces of aggression or cuts on the tyre treads; the force exerted by the rollers on the rubber during the test can worsen existing damage and rip off pre-cut pieces of rubber.

Only place vehicles on the bench of which the weight and size are compliant with the Highway Code and/or the maximum specifications of the type of installed test bench (see user manual, general presentation section).

If a vehicle being tested is driven by an untrained person (the vehicle's owner for example), it is mandatory to carry out the operations under the control of an authorised operator who will give the driver all the necessary instructions to prevent incorrect operations.

The maximum vehicle speed during use (entering and leaving the bench) is limited to 10 km/h.

Servicing, maintenance, verification or repair work



Before carrying out any work on the equipment it is imperative to power it off.

Any work other than the servicing described in these instructions can only be carried out by persons qualified by CAPELEC.

Special case of metrology checks:

When carrying out metrology checks, which require the equipment to be powered on, it is imperative that no one other than the technician carrying out the check can access the controls or work on the bench.

During work on the equipment, access to the work zone is prohibited to all persons other than the technician carrying out the work.



After the benches, have been serviced or cleaned, refit all protection equipment that may have been removed.

Recycling

The materials from the destruction of this equipment must be eliminated in compliance with the applicable regulations in the country of installation:

- Collect the oil and dispose of it in a specialised facility,
- Remove the electric and/or electronic parts,
- Dispose of the rest as scrap metal and deliver it to specialised collection points.

Fire prevention

The equipment as such cannot in principle cause a fire. However, the premises must meet fire prevention standards in compliance with regulations applicable at the location the equipment is installed.

The vehicle being tested can be the cause of a fire (accidental petrol leak, petrol fumes, sparks or other causes). For these situations, it is recommended to always have a fire protection device (extinguisher) to hand (in the area reserved for the operator) in order to immediately eliminate any danger that may arise.

Warranty terms and conditions

The warranty is voided by any alteration of the equipment or use other than that defined by the manufacturer and made without the manufacturer's permission, and by any deterioration of specifications resulting from incorrect servicing or the absence of precautions.

CAPELEC cannot be held liable for incorrect measurements resulting from the use of an operating mode different from the one recommended in this manual, or if the operating, servicing and safety conditions are not followed.

Working environment conditions

The equipment environment must meet the following specifications:

The equipment must be used under shelter.

| | |
|---|---|
| Temperature: field of reference | 20°C 5. |
| Surrounding temperature (max. range) | Between +0°C and +40°C Extendable to -15°C, +40°C with an air conditioning system in the control console |
| Operating conditions | Relative humidity between 5% and 85% |
| Water | Negligible (no vertical dripping of drops of water). No traces of damp on the walls of the premises and correct ventilation. |
| Dust | The dust must not have any electrical impact. Presence of solid bodies greater than 2.5 mm. |
| Corrosive substances | Possible presence of corrosive or polluting agents from atmospheric pollution, but no direct contact. |

| | |
|---|--|
| Impacts | Impacts less than 2 joules. |
| Vibrations | Usual in an industrial environment. Frequency between 10 and 50 Hz. Amplitude less than 0.15 mm. |
| Electromagnetic and electronic influences or radiation | No power switchgear, high frequency current emitters, devices containing radioactive substances, high voltage power lines, electricity transport lines close by. |
| Sunlight | It should be reduced to a minimum |
| Grounding | Grounding must be carried out according to the type of soil and in compliance with applicable regulations. |

II. OVERVIEW

The CAP9010 and CAP9020 are braking, suspension and tyre scrubbing test benches for light vehicles.

Presentation of the different elements

The electric control box communicates with the different chassis (braking, suspension and tyre scrubbing) and sends the information to the control console (PC or tablet).

Control console



The screen is an all-in-one PC.

There are several available screen sizes: 23, 27 inch.

The image can be echoed to a remote screen via the HDMI port or using a wireless method.

The screen is directional.

The totem can be fitted with a rotating light.

Electric control box



This unit houses:

- the processing card
- The connection terminals for the sensors and actuators
- the control part (contactors)
- The speed variation part required for suspension tests (7KW variable drive) if available

As an option, or depending on the equipment level:

- an electric brake to block the rollers
- Gradual starters

There is a location for an emergency stop.

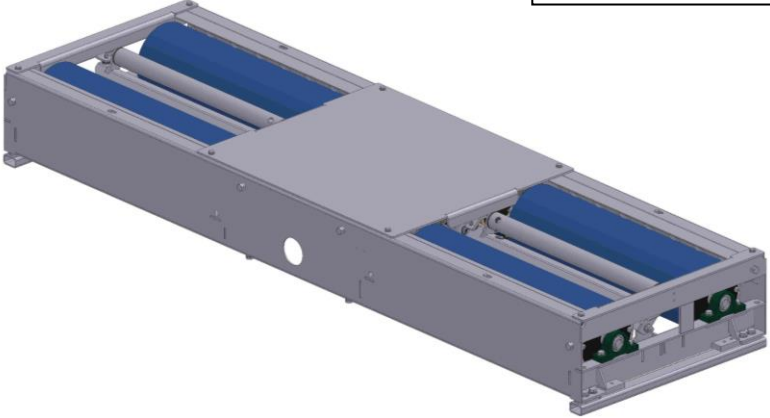
CAP9010UK and CAP9010UK-P1: Braking bench

| | | |
|--|--|---|
| | <p>CAP9010UK For testing Class 4 ATL Class 3&4 non ATL</p> | <p>Width of the braking area: 800-2200 mm</p> <p>Max. force 750 daN</p> |
| | <p>CAP9010UK-P1 Motor Cover Adaptor Class 1,2</p> | |

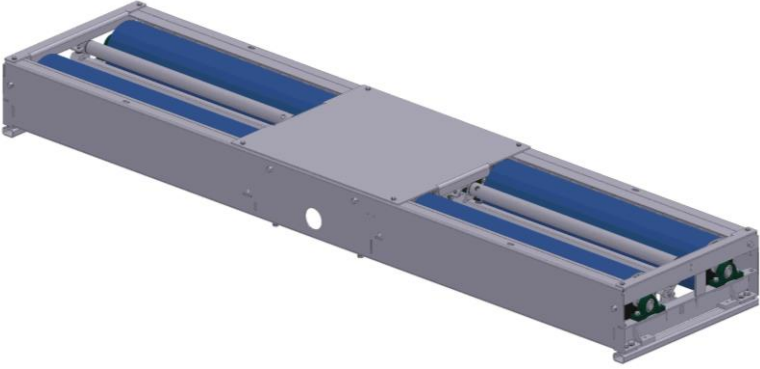
CAP9020UK and CAP9020UK-P1: Braking bench

| | | |
|--|---|---|
| | <p>CAP9020UK For testing Class 4, 5L & 7 ATL Class 3, 4, 5L & 7 non ATL</p> | <p>Width of the braking area: 800-2800mm</p> <p>Max. force 1200 daN</p> |
| | <p>CAP9020UK-P1 Motor Cover Adaptor Class 1,2</p> | |

CAP9010UK-WW : Braking bench

| | | |
|--|---|---|
|  | <p>CAP9010UK-WW Class 3&4 non ATL</p> | <p>Width of the braking area: 800-2200 mm</p> <p>Max. force 750 daN</p> |
|--|---|---|

CAP9020UK-WW : Braking bench

| | | |
|--|--|--|
|  | <p>CAP9020UK-WW Class 3, 4, 5L & 7 non ATL</p> | <p>Width of the braking area: 800-2800 mm</p> <p>Max. force 1200 daN</p> |
|--|--|--|

Remote control

The remote-control kit is composed of an infrared remote control and an infrared receiver.



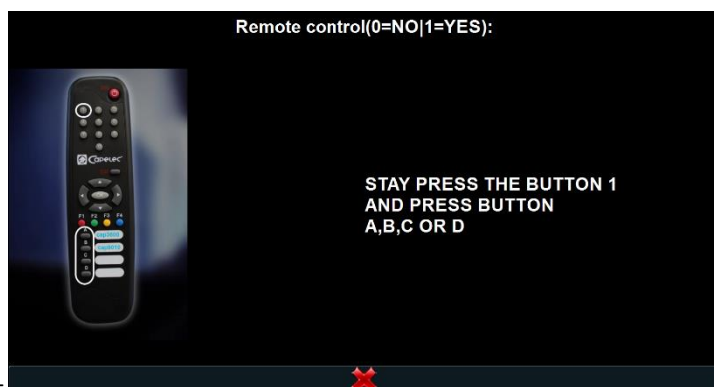
Remote control



Infrared / USB receiver

Installation is a quick two-step process:

- Connect the IR receiver to a USB port on the PC. The driver installs itself automatically.
- Place it so that it is in the operator's field of vision when they are carrying out a pollution measurement (see the installation instructions for the special case of several devices using the same remote control).
- This remote control can be associated with 4 different items of equipment. Therefore, the remote control must be associated to the different receivers. Go to Settings and Specification.

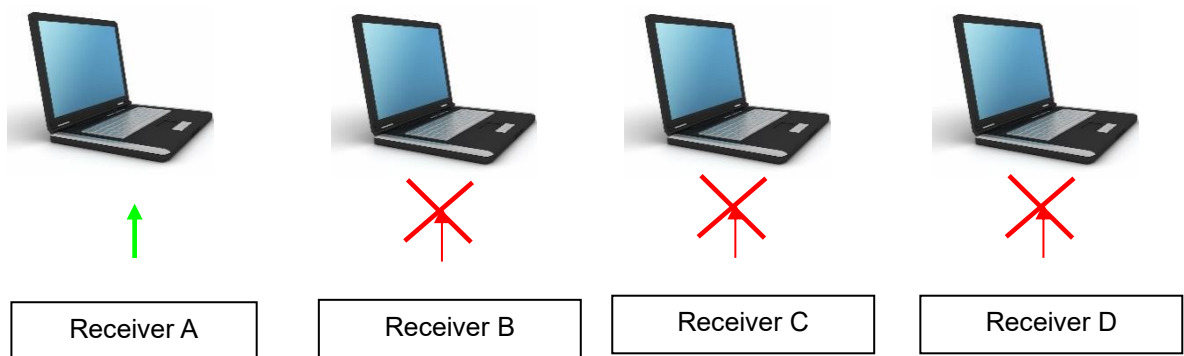


Using the remote control with several items of equipment:

Press the remote control corresponding to your A, B, C or D equipment once.

You can use the other remote control keys, only the selected equipment will receive the information.

For example, if the operator presses key A once.



Now just use the key:



–Navigation in the menu:

The different elements are selected using the directional keys. The active field is highlighted in blue.

The up and down keys are used to change the selection in the active field. The left and right keys are used to switch fields.

When all the fields are correct, the user launches the control by pressing OK.

Technical specifications

| BRAKE TESTING BENCH | LV (CAP9010) | LV+ (CAP9020) |
|---|---|---|
| Minimum space between the wheels | 800 mm | 800 mm |
| Maximum space between the outside of the wheels | 2200 mm | 2800 mm |
| Max. load per wheel | 2000 kg | 2000 kg |
| Power supply voltage | 400 V + Three phased + Ground + Neutral | 400 V + Three phased + Ground + Neutral |
| 4 rollers | $\varnothing \geq 200$ mm | $\varnothing \geq 200$ mm |
| Roller speed | 5 km/h | 5 km/h |
| Motor power | 2 x 4 kW | 2 x 4 kW |
| Indicator roller | $\varnothing 50$ mm | $\varnothing 50$ mm |
| Maximum force | 750 daN | 1200 daN |


CAPELEC equipment accessories are all in the LV category (Low Voltage) when using alternating current and VLV (Very Low Voltage) when using direct current and are all insulated.

Installation, COMMISSIONING

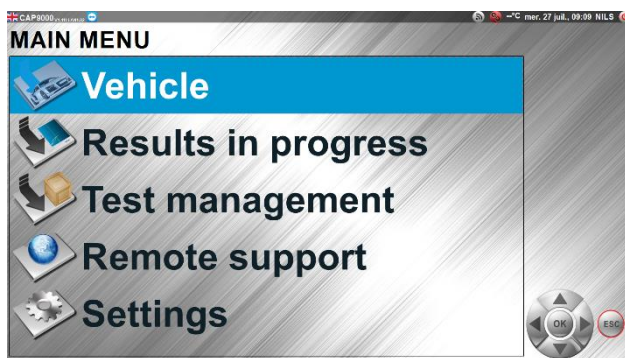
Recommendations

The equipment can be left powered on 24*7. However, it is recommended to turn off the power supply at night.

Powering on

 The screen must not be directly exposed to sunlight when using with a PC and touch screen using IR technology. In this case the touch function will be disrupted and will not work properly. In this case, it is recommended to pivot the screen slightly away from the sunlight.

After a few seconds the main menu is displayed.



Use the directional arrows on the remote control or the computer keyboard to move around inside the menu. The OK key is used to validate the choice on which the cursor is located. The ESC key is used to return to the previous window and is available at all times.

You can also press on the action zone for the function you wish to use via the touch screen function.

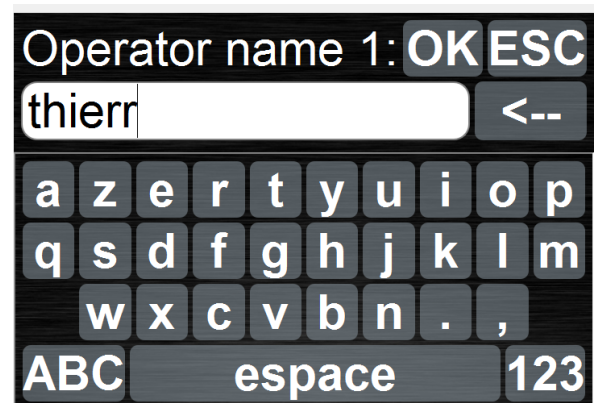
Navigation, getting started with the user interface

The user interface is optimised for use with the touch screen. The navigation functions are easy to use by pressing a button.

The user interface can also be fully operated at a distance using a remote control. This feature is useful when carrying out a test from inside a vehicle.

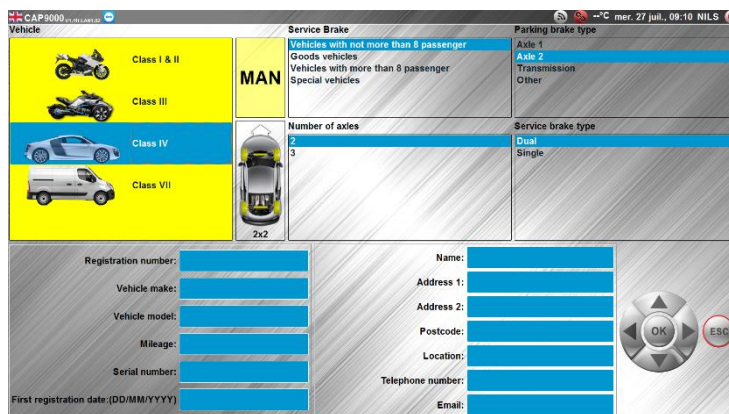
It is also possible to scroll through the menus using a keyboard and a mouse.

In all data entry fields, a CAPELEC virtual keyboard displays to carry out fast and intuitive data entry.



III. CONTROL

Selecting the vehicle and configuring the test



The following information is required for all vehicle classes

Class I & II

- Number of wheel
- Motorbike brake type (brake system: Front/Rear Linked)
- Registration number
- Make
- Model
- Registration date

Class III

- 4x4 Selection (**Note: See the car manufacturer's prescriptions before**)
- Single wheel axle (Axle1=front or Axle2=Rear)
- Parking brake type (Axle1=front, Axle2=Rear)
- Service brake type (Dual or Single)
- Registration number
- Make
- Model
- Registration date

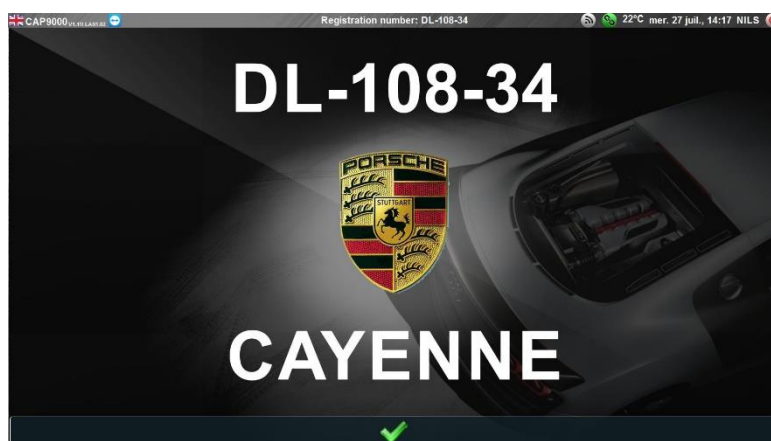
Class IV

- Manual Mode (MAN) or Automatic Mode (ATL)
- 4x4 Selection (**Note: See the car manufacturer's prescriptions before**)
- Service brake
- Number of axles
- Parking brake type (Axle1=front, Axle2=Rear)
- Service brake type (Dual or Single)
- Registration number
- Make
- Model
- Registration date

Class VII

- Manual Mode (MAN) or Automatic Mode (ATL)
- 4x4 Selection (**Note: See the car manufacturer's prescriptions before**)
- Service brake
- Number of axles (2 or 3)
- Parking brake type (Axle1=front, Axle2=Rear)
- Service brake type (Dual or Single)
- Design Gross Weight (DGW)
- Registration number
- Make
- Model
- Registration date

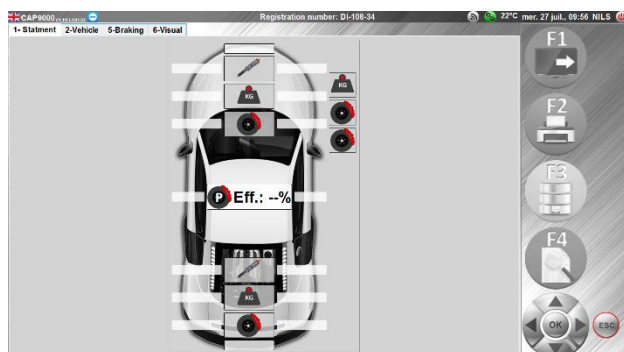
The test configuration summary is displayed:



Current results

This page can be viewed at all times to follow the test progress status:

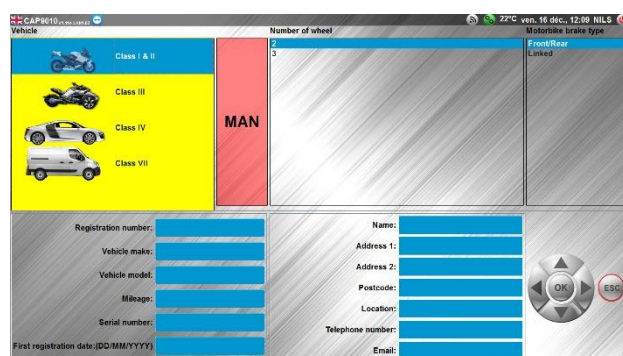
- The detail is available using the tabs on the right part.
Example: Test started, no tests carried out



Operating instructions

Manual Mode

“Class I or Class II”



You must use motorcycle cover plate


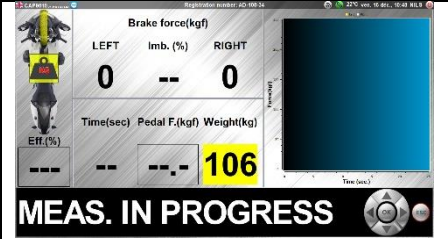
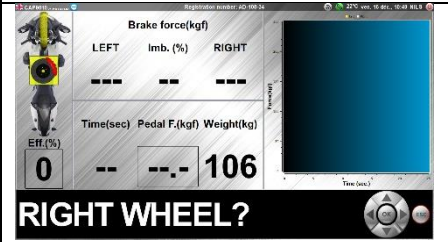

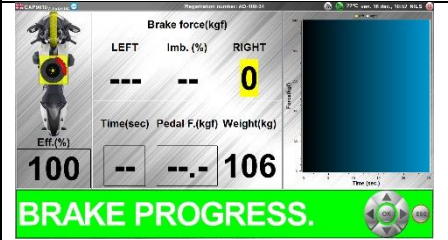
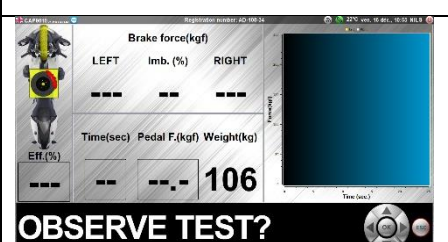

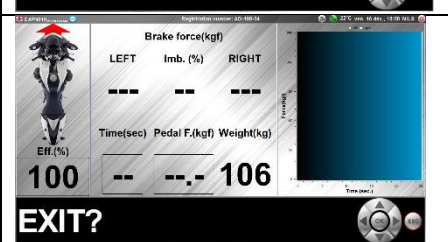

Most machine have two controls, one operating the front wheel brake and the other rear wheel brake. In this case, you must use **Front/Rear**.

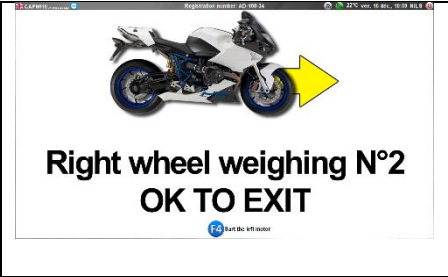

Where a linked or dual system is operated by one control, in this case you must use **Linked**

Example of side car, which have one command for front wheel and the other command link rear wheel and side car wheel, you have to:

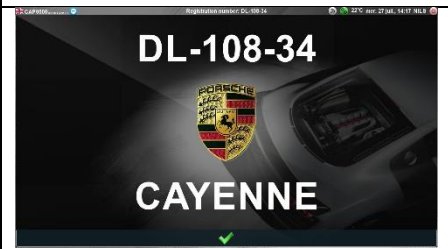
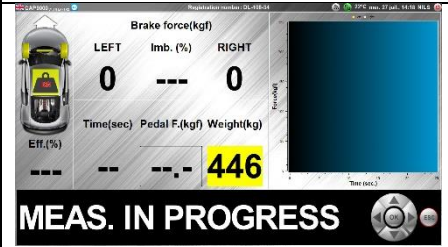
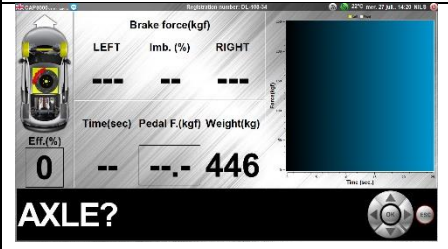

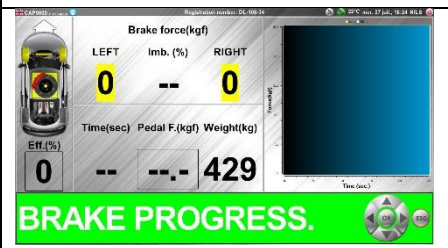
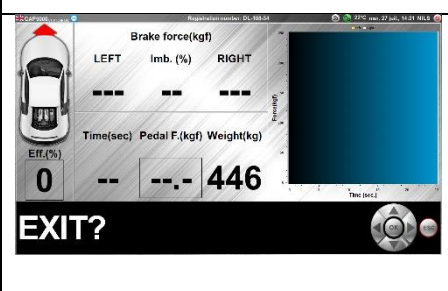
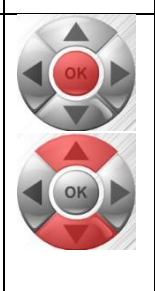
- On the customer header, select “Front/rear” and 3 wheels
- Go to first wheel (front wheel), control weight and brake
- Go to second wheel (rear wheel), control weight only
- Go to third wheel (side car wheel), control weight only
- Print test report
- For the other command, on the customer header, select “Linked” and 3 wheels

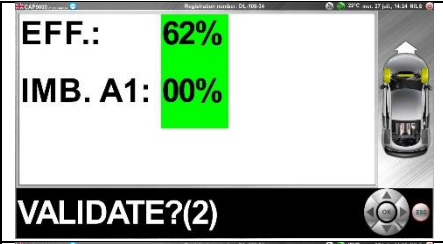




- Go to the first wheel (front wheel), control weight only
- Go to second wheel (rear wheel), control weight and brake
- Go to third wheel (side car wheel), control weight and brake
- Print test report

| Software | Command | To Do |
|---|---|--|
|  | | Drive into brake tester on the right or on the left. |
|  | | The weight measurement starts automatically. The weighing results are displayed on the screen |
|  |  | Select options: <ul style="list-style-type: none"> • Left/Right wheel • Exit (if you don't have any brake, only weight) And Press OK |
|  | | Apply service brake to the maximum Roller stop at: <ul style="list-style-type: none"> • Lock • Force stable during 3 seconds • Wheels out of the rollers • Abort test (Press ESC) |
|  |  | Press OK to start an observe test. Or ESC |
|  |  | Select options: <ul style="list-style-type: none"> • Left/Right wheel • Exit And Press OK |

| | | |
|---|---|--|
|  |  | <p>You have 5 seconds to drive out. If you don't have any time you can press OK.</p> |
| <p>Test the second and/or third wheel as seen previously</p> | | |


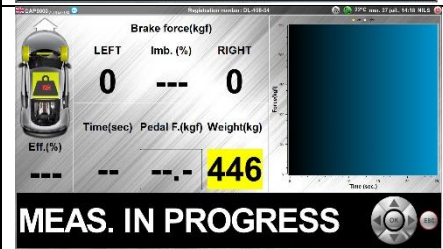
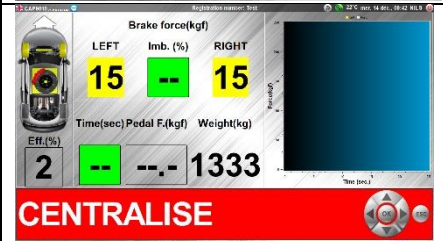


“Class III, Class IV or Class VII example”

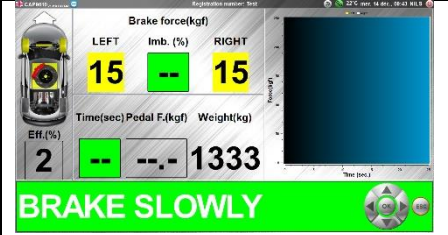
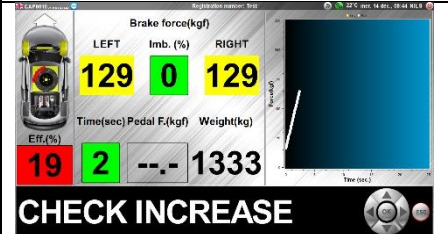
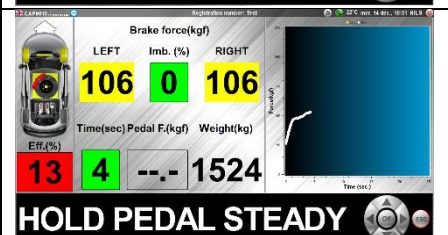
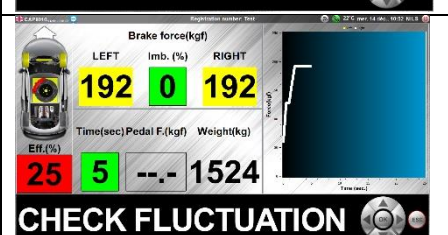
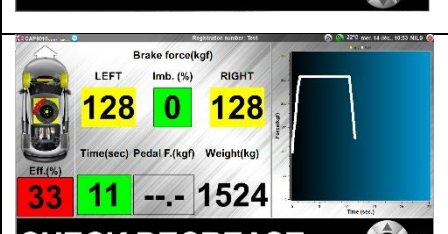
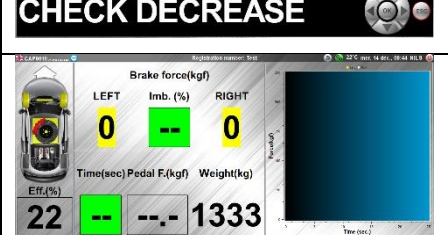
| Software | Command | To Do |
|---|---|---|
|  | | <p>Drive into brake tester</p> |
|  | | <p>The weight measurement starts automatically. The weighing results are displayed on the screen</p> |
|  |  | <p>Select options:</p> <ul style="list-style-type: none"> • Axle • Left wheel • Right wheel • Exit <p>And Press OK</p> |
|  | | <p>Apply service brake to the maximum</p> <p>Roller stop at:</p> <ul style="list-style-type: none"> • Lock • Force stable during 3 seconds • Wheels out of the rollers • Abort test (Press ESC) |
|  |  | <p>Press OK to finish</p> <p>Or</p> <p>Select options:</p> <ul style="list-style-type: none"> • Axle • Left wheel • Right wheel • Exit |

| | | |
|---|--|--|
|  |   | <p>You can invalidate and restart if you press ESC</p> |
|  |  | <p>You have 5 seconds to drive out. If you don't have any time you can press OK.</p> |
| <p>Test the second axle as seen previously</p> | | |

III.1.1. Automatic Mode (ATL)

“Refer to the MOT Inspection Manual for details of the correct MOT test procedure”


| Software | Command | To Do |
|---|---------|---|
|  | | <p>Drive into brake tester</p> |
|  | | <p>The weight measurement starts automatically. The weighing results are displayed on the screen</p> |
|  | | <p>Motors starts automatically. 2 secs to centralise</p> <div style="text-align: center;">  <p>Stay inside the car. Nobody around the car during the test.</p> </div> |
|  | | <ul style="list-style-type: none"> • Check for Bind <p>Roller stop at:</p> <ul style="list-style-type: none"> • Lock • Release pedal force • Wheels out of the rollers • Abort test (Press ESC) |


| | | |
|---|--|--|
|  | | <ul style="list-style-type: none"> Slowly apply service brake Roller stop at: <ul style="list-style-type: none"> Lock Release pedal force Wheels out of the rollers Abort test (Press ESC) |
|  | | <ul style="list-style-type: none"> Check for rate of increase Roller stop at: <ul style="list-style-type: none"> Lock Release pedal force Wheels out of the rollers Abort test (Press ESC) |
|  | | <ul style="list-style-type: none"> Hold the pedal pressure steady Roller stop at: <ul style="list-style-type: none"> Lock Release pedal force Wheels out of the rollers Abort test (Press ESC) |
|  | | <ul style="list-style-type: none"> Check for excessive fluctuation of brake effort Roller stop at: <ul style="list-style-type: none"> Lock Release pedal force Wheels out of the rollers Abort test (Press ESC) |
|  | | <ul style="list-style-type: none"> Gradually release the service brake and check for rate decrease. Roller stop at: <ul style="list-style-type: none"> Lock Release pedal force Wheels out of the rollers Abort test (Press ESC) |
|  | | Gradually apply the service brake The imbalance left-right is measured Roller stop at: <ul style="list-style-type: none"> Lock Force stable during 3 seconds Release pedal force Wheels out of the rollers Abort test (Press ESC) |

| | | |
|---|--|--|
| | | <p>You can invalidate and restart if you press ESC</p> |
| | | <p>You have 5 seconds to drive out. If you don't have any time you can press OK.</p> |
| <p>Test the second and/or third axle as seen previously</p> | | |

III.1.1. Print results

| | | <p>"F1" key: Restart a new test</p> <p>"F2" key: Print results</p> <p>"F3" key: Save results</p> <p>"F4" key: Preview the results before printing</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--------------|---|---------------------------|---------|------|------|--|------|---------|------|------|--|------|---------------------|--|--------------|--|-------------|--|--------------|-------------|--------------|-------------|--------------|-------------|---------|------|---------------------------|--------|-----------------------|---------|----------------|------|--------------------|----|--------------------|-----|------------------------------|------|-------------------|--------------|---|--------|----------------|------|--|--------|---------------------------------------|--------|------------------------------|------|-----------------------------|-----|----------------------------|--------------|------------------|-------|----------------------------------|-----|----------------|-------|--------------------------|--------|-------------------------|-----|---------------------|--------|---------------------------|--------|-------------|-------|--|--|-----------------------|---------|--|--|--|--|--------------------|----|--|--|--|--|--------------------|-----|--|--|--|--|-------------------|--------------|--|--|--|--|------------------|-------|--|--|--|--|--------------------------|--------|--|--|--|--|--|--|
| <table border="1"> <thead> <tr> <th></th> <th>Bind</th> <th>Fluctuation</th> <th>Grabbing</th> <th>Rate of Increase/Decrease</th> </tr> </thead> <tbody> <tr> <td>Axe n°1</td> <td>Pass</td> <td>Pass</td> <td></td> <td>Pass</td> </tr> <tr> <td>Axe n°2</td> <td>Pass</td> <td>Pass</td> <td></td> <td>Pass</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">Brake testing bench</th> <th colspan="2">Designations</th> <th colspan="2">Information</th> </tr> </thead> <tbody> <tr> <td>Designations</td> <td>Information</td> <td>Designations</td> <td>Information</td> <td>Designations</td> <td>Information</td> </tr> <tr> <td>Bind A1</td> <td>Pass</td> <td>Right wheel force (EF) A2</td> <td>670kgf</td> <td>Sum of forces (EF) A2</td> <td>1340kgf</td> </tr> <tr> <td>Fluctuation A1</td> <td>Pass</td> <td>Brake imbalance A2</td> <td>0%</td> <td>Selected method A2</td> <td>A/A</td> </tr> <tr> <td>Rate of Increase/Decrease A1</td> <td>Pass</td> <td>Stop triggered A2</td> <td>STOP RELEASE</td> <td>Parking, Max. left wheel force (A/A) A2</td> <td>257kgf</td> </tr> <tr> <td>Fluctuation A2</td> <td>Pass</td> <td>Parking, Max. right wheel force (A/A) A2</td> <td>257kgf</td> <td>Parking, Total braking force (A/A) A2</td> <td>514kgf</td> </tr> <tr> <td>Rate of Increase/Decrease A2</td> <td>Pass</td> <td>Parking, Selected method A2</td> <td>A/A</td> <td>Parking, Stop triggered A2</td> <td>STOP RELEASE</td> </tr> <tr> <td>Axle weighing A1</td> <td>152kg</td> <td>Parking, Global brake efficiency</td> <td>99%</td> <td>Total weighing</td> <td>304kg</td> </tr> <tr> <td>Left wheel force (EF) A1</td> <td>514kgf</td> <td>Global brake efficiency</td> <td>99%</td> <td>Total braking force</td> <td>230kgf</td> </tr> <tr> <td>Right wheel force (EF) A1</td> <td>514kgf</td> <td>Test Result</td> <td>99.8%</td> <td></td> <td></td> </tr> <tr> <td>Sum of forces (EF) A1</td> <td>1028kgf</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Brake imbalance A1</td> <td>0%</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Selected method A1</td> <td>A/A</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Stop triggered A1</td> <td>STOP RELEASE</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Axle weighing A2</td> <td>152kg</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Left wheel force (EF) A2</td> <td>670kgf</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | | Bind | Fluctuation | Grabbing | Rate of Increase/Decrease | Axe n°1 | Pass | Pass | | Pass | Axe n°2 | Pass | Pass | | Pass | Brake testing bench | | Designations | | Information | | Designations | Information | Designations | Information | Designations | Information | Bind A1 | Pass | Right wheel force (EF) A2 | 670kgf | Sum of forces (EF) A2 | 1340kgf | Fluctuation A1 | Pass | Brake imbalance A2 | 0% | Selected method A2 | A/A | Rate of Increase/Decrease A1 | Pass | Stop triggered A2 | STOP RELEASE | Parking, Max. left wheel force (A/A) A2 | 257kgf | Fluctuation A2 | Pass | Parking, Max. right wheel force (A/A) A2 | 257kgf | Parking, Total braking force (A/A) A2 | 514kgf | Rate of Increase/Decrease A2 | Pass | Parking, Selected method A2 | A/A | Parking, Stop triggered A2 | STOP RELEASE | Axle weighing A1 | 152kg | Parking, Global brake efficiency | 99% | Total weighing | 304kg | Left wheel force (EF) A1 | 514kgf | Global brake efficiency | 99% | Total braking force | 230kgf | Right wheel force (EF) A1 | 514kgf | Test Result | 99.8% | | | Sum of forces (EF) A1 | 1028kgf | | | | | Brake imbalance A1 | 0% | | | | | Selected method A1 | A/A | | | | | Stop triggered A1 | STOP RELEASE | | | | | Axle weighing A2 | 152kg | | | | | Left wheel force (EF) A2 | 670kgf | | | | | | <p>If you select Braking tab, you see the complete test report.</p> <p>In ATL mode you have the test result.</p> |
| | Bind | Fluctuation | Grabbing | Rate of Increase/Decrease | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axe n°1 | Pass | Pass | | Pass | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axe n°2 | Pass | Pass | | Pass | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brake testing bench | | Designations | | Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Designations | Information | Designations | Information | Designations | Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bind A1 | Pass | Right wheel force (EF) A2 | 670kgf | Sum of forces (EF) A2 | 1340kgf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fluctuation A1 | Pass | Brake imbalance A2 | 0% | Selected method A2 | A/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rate of Increase/Decrease A1 | Pass | Stop triggered A2 | STOP RELEASE | Parking, Max. left wheel force (A/A) A2 | 257kgf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fluctuation A2 | Pass | Parking, Max. right wheel force (A/A) A2 | 257kgf | Parking, Total braking force (A/A) A2 | 514kgf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rate of Increase/Decrease A2 | Pass | Parking, Selected method A2 | A/A | Parking, Stop triggered A2 | STOP RELEASE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axle weighing A1 | 152kg | Parking, Global brake efficiency | 99% | Total weighing | 304kg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Left wheel force (EF) A1 | 514kgf | Global brake efficiency | 99% | Total braking force | 230kgf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Right wheel force (EF) A1 | 514kgf | Test Result | 99.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sum of forces (EF) A1 | 1028kgf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brake imbalance A1 | 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Selected method A1 | A/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stop triggered A1 | STOP RELEASE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Axle weighing A2 | 152kg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Left wheel force (EF) A2 | 670kgf | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <p>OK if you want a test report with the car</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |





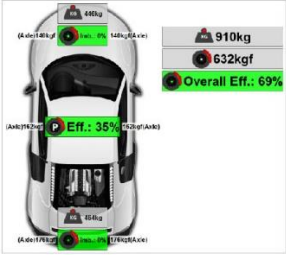
ESC if you want the complete table

Example if you press OK:

POST STATION Printed on 22/07/2016 at 14:00:24

Direction name: 26 0006 Direction: M&S
 City: MIRELIZY-LE-VAL VIN: MREZ7416111L046 03
 Registration date: 19/10/2010 Test started on 27/07/2016 at 09:26:55
 License: Test ended on 27/07/2016 at 14:27:30

| Vehicle information | | Designations | |
|---------------------|------------|--------------------------|--|
| Registration number | 26 0006 | Make | ROBUR |
| Model | | Model | OXI/ENE |
| Registration date | 19/10/2010 | Number of seats | 4 |
| Driver name | | 8 seats mode | Vehicle with not more than 8 passenger |
| Address 1 | | Driving license location | Any 2 |
| Address 2 | | Color | |
| Postcode | | Vehicle type | Class IV |
| Location | | Class type | 26.2 |
| | | Motoric mode | 9004 |

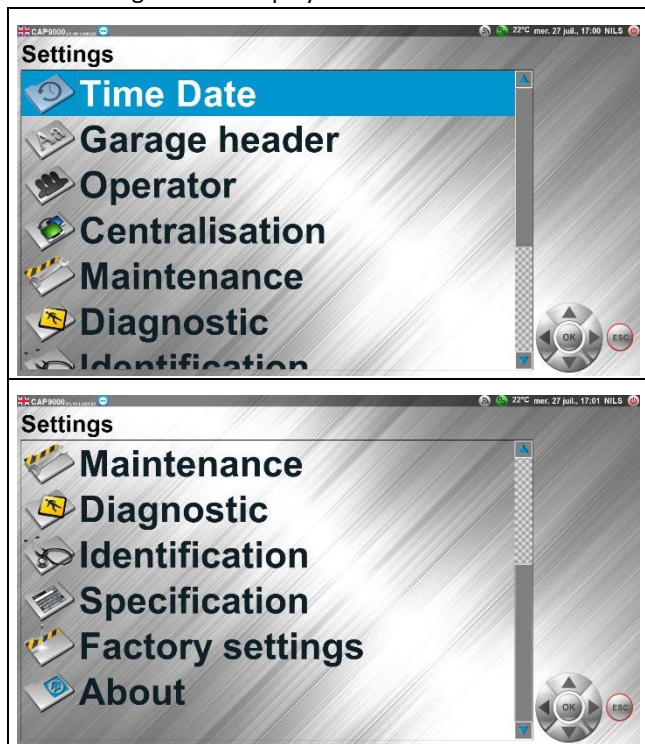


VISUAL

IV. SETTINGS

To launch the Settings menu, from the home page.

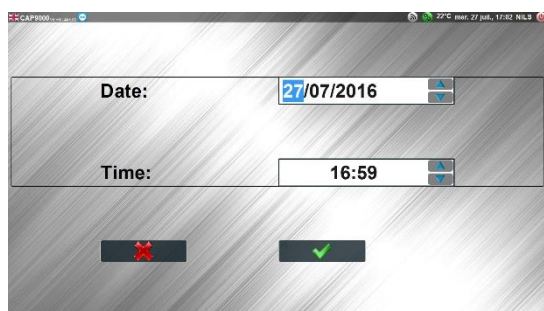
The following menu is displayed:



The settings menu is composed of different sub-menus which are described in detail below.

Date/time:

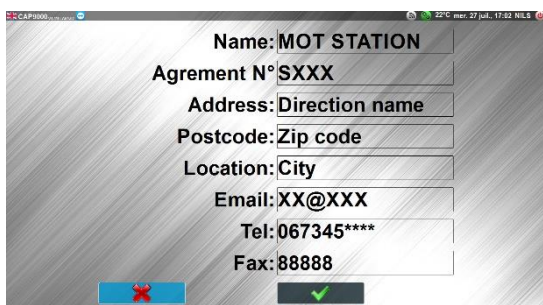
Used to set the date and time on CAP9010/CAP9020s.



Select the field using the OK key, use the UP and DOWN arrows to change the value. Then, to save the new values, press OK.

Exit using the ESC key.

Garage header:

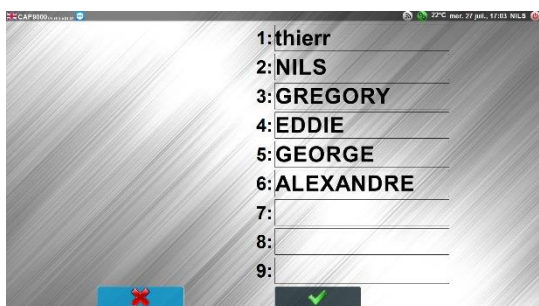


Name: MOT STATION
 Agreement N°: SXXX
 Address: Direction name
 Postcode: Zip code
 Location: City
 Email: XX@XXX
 Tel: 067345****
 Fax: 88888

Used to enter and customise garage or MOT centre related information. This information is printed on the test report header.

Operator:

Used to enter up to 9 operator names. The principle is the same as for the "garage header".



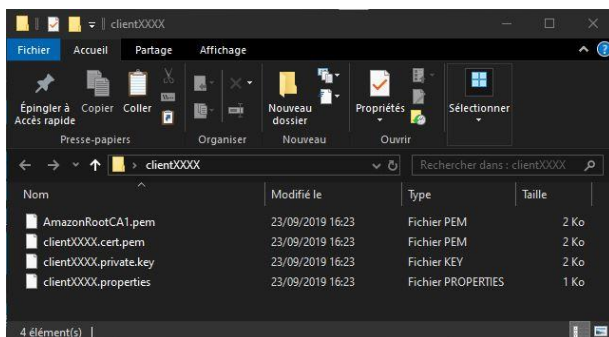
1: thierr
 2: NILS
 3: GREGORY
 4: EDDIE
 5: GEORGE
 6: ALEXANDRE
 7:
 8:
 9:

To select the operator name on the main menu, press the **top right zone and select the operator**. This name will be printed on the completed test report.

Centralisation:

In order to connect to AWS, the equipment will require an X.509 client certificate, which is issued by DVSA. These certificates are being supplied to the Authorised Examiner Designated Manager in a zip file format and are unique for each client.

Unzip this file with Authorised Examiner Designated Manager ID as password.



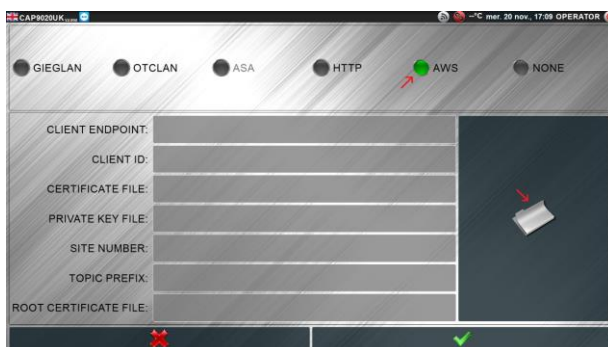
The minimum list files form DVSA required by WIN9010 software:

- AmazonRootCA1.pem
- XXXX.cert.pem
- XXXX.private.key
- XXXX.properties

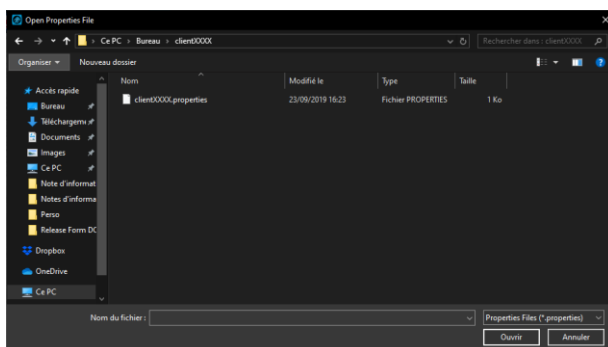
XXXX is a unique identifier for each client.

Copy them to USB stick.

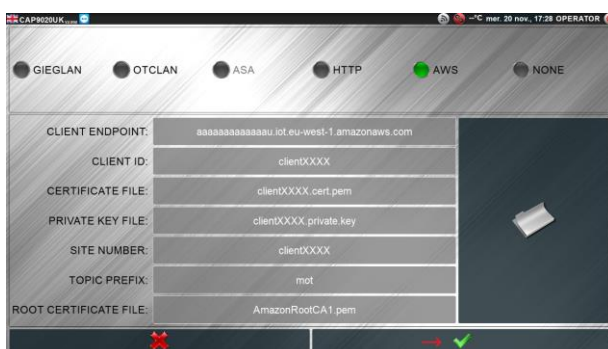
Plug this USB stick on CAP9010 computer.



Select AWS and click on folder button.



Browse to certificate folder on your USB stick and select XXXX.properties

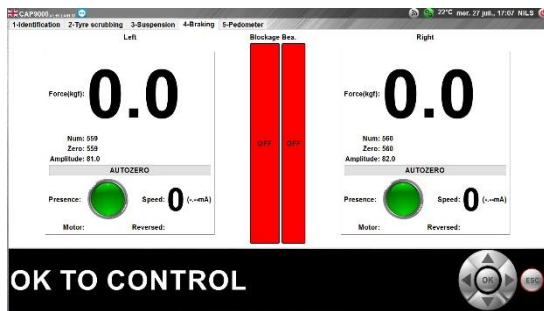


Validate by click on bottom right button and restart software.

Maintenance:

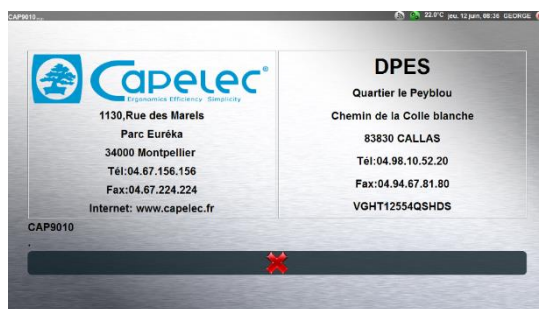
Maintenance menu (password protected).

Diagnostic:



This window contains the diagnostic of all sensors are inside the brake tester.

About:



This window contains the manufacturer contact details, the maintenance company details and information about the software versions. For more information about our products go to the web site: www.capelec.fr



This symbol indicates that, in compliance with the WEEE directive (2002/96/EC) and with your local regulations, this product must not be disposed of with household waste. It must be deposited in a zone specific to this effect, for example an official electric and electronic equipment (EEE) waste collection centre for recycling, or at an approved product exchange point which is available when purchasing a new product of the same type as the product being disposed of. Any failures to respect these recommendations on the disposal of this type of waste can have negative effects on the environment and public health because these electric and electronic products generally contain potentially dangerous substances. In parallel, your complete collaboration in the correct disposal of this product will contribute to a better use of natural resources. For more information on equipment collection points for recycling, contact your town hall, the waste collection department, the approved WEEE plan or the household waste removal service.