
HOMEBASE 3

Homebase, i-track and Tire Management
Operators Manual

Form ZEEWA620A REV A



homebase

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Homebase 3



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INTRODUCTION

Homebase serves as the software platform for wheel alignment systems. Customer, order, user, vehicle and measurement information is stored and edited in the Homebase. Backup, restoring and updating of the Homebase is performed on the database manager.

The Homebase system plugins:

- i-track
- Tire manager.

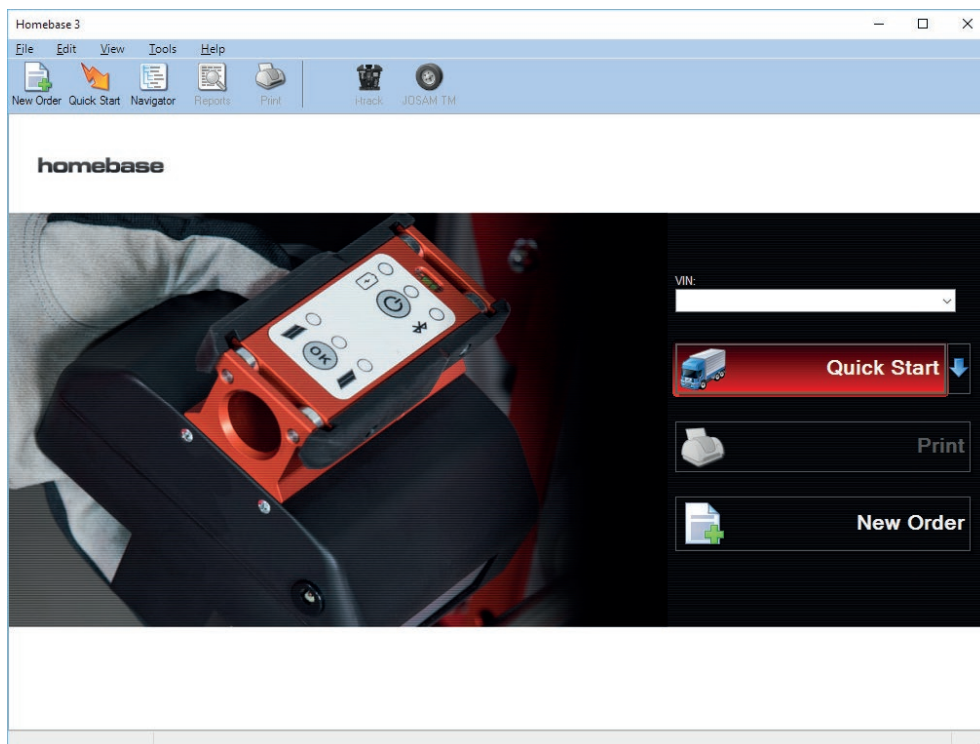
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Homebase Start

The Homebase system is designed to operate on different levels depending on how the measurement is performed, the structure of the workshop and how the result is managed.

Start the HomeBase application

The following alternatives are displayed in the Startup window:



Quick Start

VIN

VIN (Vehicle Identification Number) is used when performing straightforward measuring without customer or vehicle information.

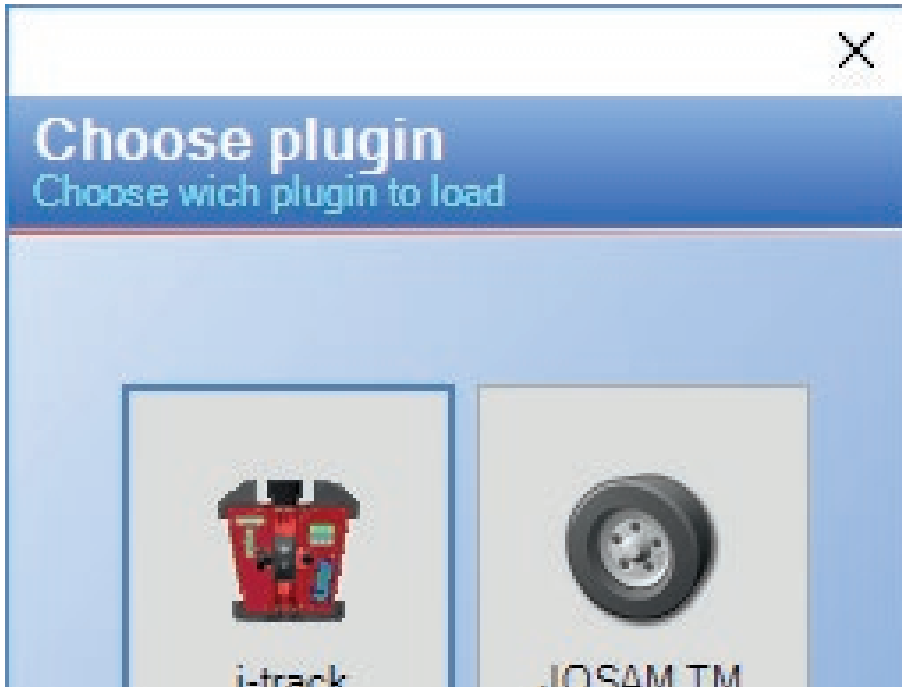
Enter the VIN. For more information see section New Order page 12.

Quick Start

To perform a quick measurement click the **[Quick start]** button or click the arrow to select the vehicle type of vehicle to perform a measurement.



This selection will via the configuration wizard, take you to the chosen plugins installed on your computer. When multiple measurement plugins are installed the user can choose which plugin to use.



NOTE: IT IS NOT POSSIBLE TO START MEASURING WITH ONE PLUGIN AND CONTINUING WITH ANOTHER.

Print

Print the report when measuring is complete. When starting a measurement using Quick Start, customer and vehicle information can still be added. Click on Navigator to add customer and vehicle information before printing View and print the current order (if not greyed out).



New Order

Creates new orders and enables the operator to enter new information concerning the vehicle and customers. This information can be used as a reference for both historical and future references. The customer information stored will be displayed in the letterhead on the order printout.




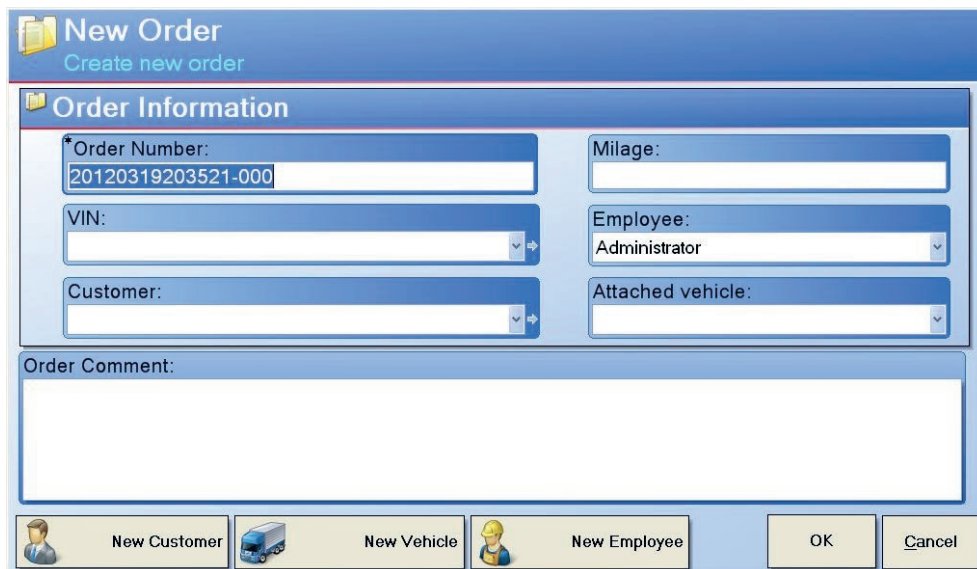
NOTE: FOR MORE INFORMATION CONCERNING CREATING NEW ORDERS AND THE DIFFERENT FUNCTIONS READ THE NEW ORDER CHAPTER ON PAGE 13.

NOTE! CHECK THE CALIBRATION OF YOUR EQUIPMENT REGULARLY.

NOTE! CHECK THE REST OF THE EQUIPMENT REGULARLY FOR DAMAGE AND PLAY THAT CAN AFFECT THE MEASUREMENTS ACCURACY.

New Order

Click on the  [New Order Button] or on the start screen new order described in the previous chapter.




Order Number


The software will automatically generate an order number that is based on the date and number of orders created on that specific date.



The generated order number can be redesigned to comply with the routines and work sequence of the work shop by clicking and typing a new type of order number.

Vehicle Identification Number (VIN)

All vehicles entered in the Homebase software must have a unique identification number. This number can be for example the chassis number. When using i-track (as it is possible to measure a truck and semi trailer under one operation) enter the VIN number for the truck and the VIN for the Semi trailer in the “**Attached Vehicle**” box.

To select a existing VIN click on the drop down menu button  in the VIN box. Information will automatically be displayed regarding model, configuration, manufacturer, model,year and type.


To enter a new vehicle and all additional information simultaneously, select  and the required customer from the drop down menu for the specific order.



To modify the VIN information, access the Navigator menu  under the Vehicle tab .

Mileage

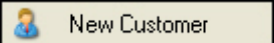
Enter the mileage.

Customer

Select a customer by clicking on the drop down menu button  next to the text box, or type in a new customer manually. Type in a new customer add additional information for this customer later by editing the customer in the


Navigator  menu under the Customer tab .

Enter a new customer and all the additional information simultaneously by selecting the New customer

 button. Select the customer in the customer drop down menu for this specific order.

New Employee

Select the employee that is, or will be, performing the measurement.

Select New employee button  to add a new employee to the software. This information can

then, if needed, be edited in the Navigator menu  under the Employee tab (administrator rights required).

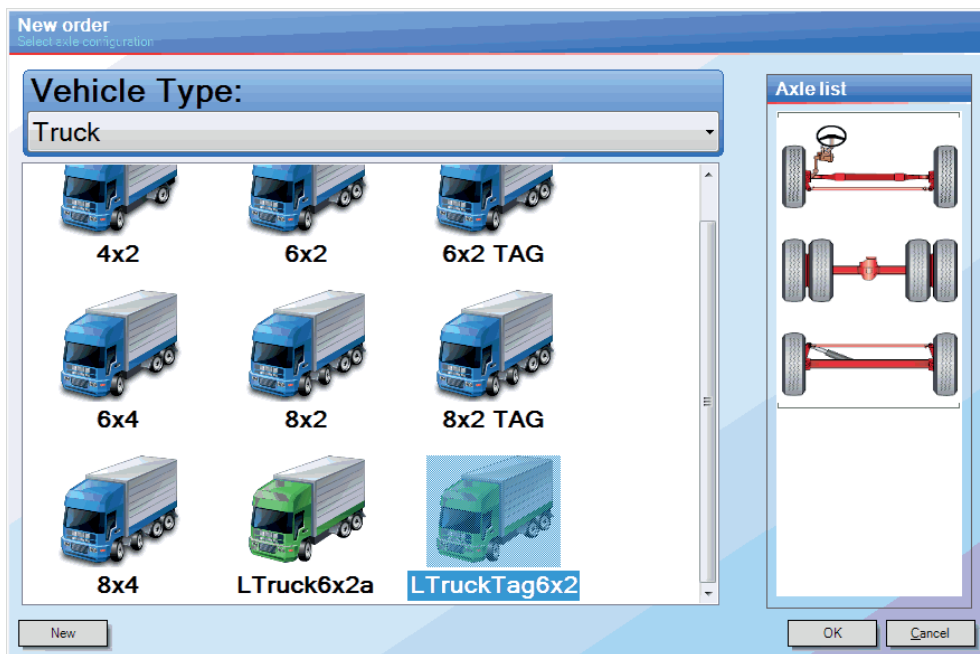
NOTE: FOR MORE INFORMATION ABOUT THE EMPLOYEE FUNCTION READ NAVIGATOR CHAPTER AND THE INFORMATION ABOUT THE EMPLOYEE TAB.

Order Comment

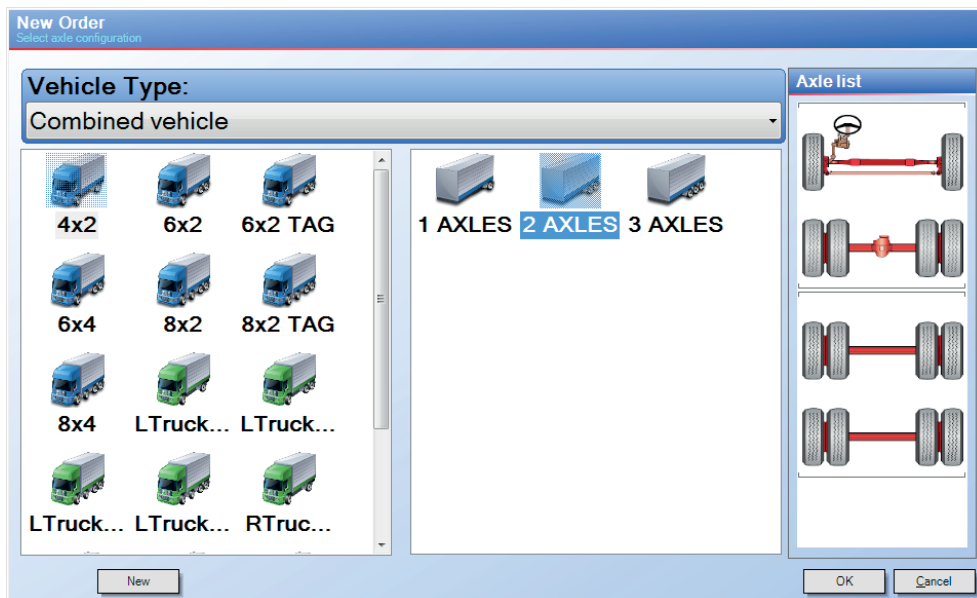
Add additional comments. Comments will be displayed on the report sheet.

Select Axle Configuration

Select an axle configuration.



If choosing a combined vehicle, select both configurations.



Vehicle type

Choose a vehicle type.

Select axle configuration.

If the axle configuration is not listed, click on .



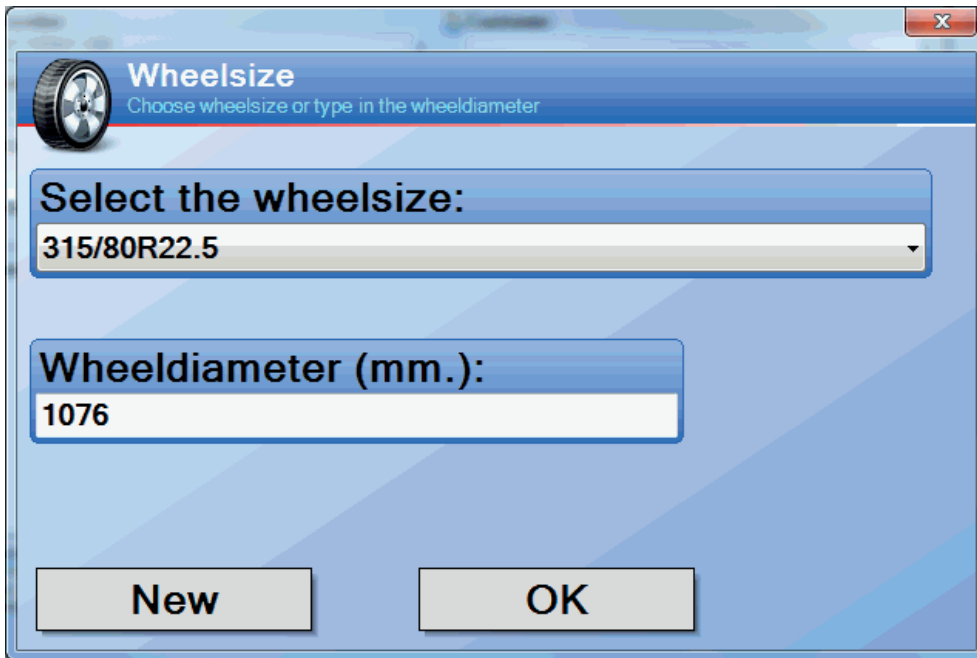
= Blue vehicle represents standard configurations



= Green vehicle represents user defined configurations

Select Vehicle Size

Only used for truck, combined vehicles and articulated buses. Not used for (semi-) trailer as rolling does not occur during measurement.




The screenshot shows a software dialog box titled "Wheelsize" with a subtitle "Choose wheelsize or type in the wheeldiameter". The dialog contains a dropdown menu for selecting a wheel size, currently showing "315/80R22.5". Below the dropdown is a text input field for "Wheeldiameter (mm.)" containing the value "1076". At the bottom of the dialog are two buttons: "New" and "OK".

Check the vehicles wheel size, and select it from the list. If the vehicle's wheel size is not available on the list enter the tire diameter in the "Wheel diameter" box. or create a new if the tire is not available on the list.

NOTE: WHEN THE VEHICLE HAS MULTIPLE TIRE SIZES CHOOSE THE SIZE WHICH OCCURS MOST OFTEN. AFTER ROLLING THE VEHICLE AXLE(S) WITH DIFFERENT TIRE DIAMETER LIFT AXLES AND ROTATE 180 DEGREES.

Navigator

Navigator is used to administrate the database.

To access the Navigator click on the Navigator button  in the Homebase start window. Under each tab in the database you can:



Create a new



Edit existing (Only accessible with administrator rights)

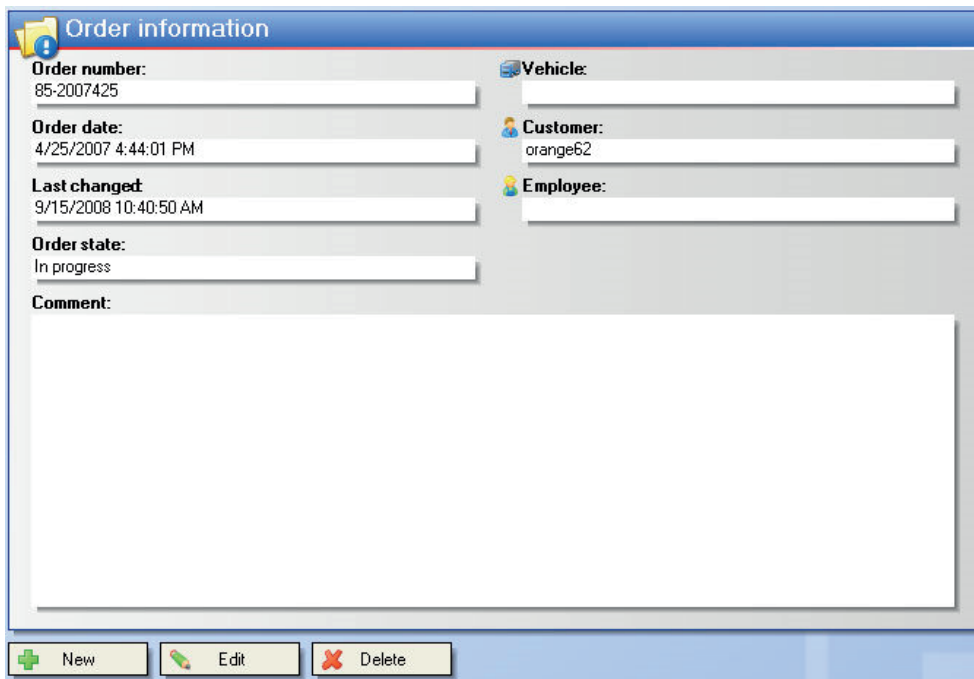


Delete (Only accessible with administrator rights)

Look For:

Navigate through large quantities of information.

Orders



All the orders created within the Homebase are located under the order tab inside navigator. Orders are created either by creating a new order, or automatically generated when Quick Start is selected in the start window. In the order information window, orders can be created, edited and deleted. By selecting an order, information for that order will be displayed.

In the order tab, select the required order sorting process:



Vehicle



Customer




Employee.


NOTE: WHEN PROCESSING A LARGE AMOUNT OF ORDERS, USE THE SEARCH FUNCTION TO FILTER INFORMATION. AFTER SELECTING AN ORDER THE CHANGE AND ADD FUNCTIONS AVAILABLE.


Customers

Displays all information related to the existing customers.

| Address | Contact |
|--|---|
| Company name: <input type="text" value="Customer 1 Online HK"/> | First name: <input type="text"/> |
| Address: <input type="text"/> | Last name: <input type="text"/> |
| ZIP code: <input type="text"/> | Phone number: <input type="text"/> Fax number: <input type="text"/> |
| City: <input type="text"/> | email: <input type="text"/> |
| <input type="button" value="New"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> | |


 Create a new

 Edit existing (Only accessible with administrator rights)


 Delete (Only accessible with administrator rights)


Employees


Displays all information related to the existing workshop employees .

| Information |
|--|
|  |
| Name: <input type="text" value="Administrator"/> |
| User name: <input type="text" value="ADMIN"/> |
| Employee number: <input type="text" value="-2"/> |
| <input checked="" type="checkbox"/> Administrator rights: |
| <input type="button" value="New"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> |

When adding a new employee Administrator rights Administrator Rights: may be selected.

 Create a new

 Edit existing (Only accessible with administrator rights)

 Delete (Only accessible with administrator rights)

New Employee ? X

New Employee
Add new employee

*Number:

*Password:

*Full Name:

*Verify Password:

*User Name:

Administrator Rights:

OK Cancel

NOTE: ADMINISTRATOR RIGHTS GIVE THE EMPLOYEE THE POSSIBILITY TO EDIT OR DELETE ALL INFORMATION (ORDERS, CUSTOMERS, EMPLOYEES, VEHICLES, VEHICLE SPECIFICATIONS) AS WELL AS CHANGING THE SYSTEM SETTINGS OF THE HOMEBASE.

NOTE: TICK THE ACTIVATE LOGIN Activate login: BOX UNDER THE CONFIGURATION TAB . PLEASE NOTE THAT THIS SHOULD ONLY BE ACTIVATED WHEN AT LEAST ONE EMPLOYEE HAS ADMINISTRATOR RIGHTS. FOR EXAMPLE, THE WORKSHOP SUPERVISOR WHO MANAGES THE SPECIAL SETTINGS OF HOMEBASE AND THE PASSWORDS FOR THE STAFF.

NOTE: IN CASE THE ACTIVATE LOGIN Activate login: UNDER THE CONFIGURATION TAB  IS NOT CHECKED, THE USER IS AUTOMATICALLY ADMINISTRATOR AND HAS FULL RIGHTS TO ADD, EDIT OR DELETE ALL INFORMATION IN THE DATABASE.

Vehicle Information

Displays all vehicle information related to existing vehicles.

Information

VIN:
TRUCK2

Owner:

Configuration:

Manufacturer:

Model:

Model Year:

Vehicle Type:
Truck

Steering:
Left

+ New

✎ Edit

✕ Delete

.Add a new vehicle.

Edit a new vehicle (Only accessible with administrator rights)

Delete a vehicle (Only accessible with administrator rights)

NOTE: INFORMATION FOR VEHICLE TYPE AND STEERING IS NECESSARY FOR USAGE OF THE TRACK PLUGIN.

Vehicle Configuration

All information related to the existing custom created vehicle specifications is displayed under vehicle configuration.

Information

Name:
LTruck6x2a

Manufacturer:
Volvo

Model:
FH 16

Vehicle Type:
Truck

Steering:
Left

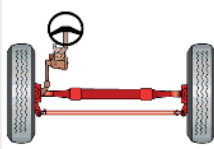
+ New

✎ Edit

✖ Delete

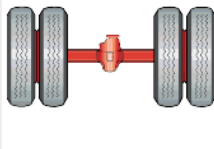
📄 Copy

Axle Configuration

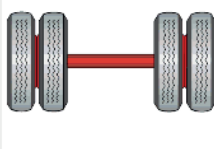


| Axle no: 1 | Min | Max |
|--------------|-------------------------------------|-------------------------------------|
| Total toe | <input type="text" value="1"/> mm/m | <input type="text" value="3"/> mm/m |
| Left Camber | <input type="text" value="30"/> ° | <input type="text" value="0"/> ° |
| Right Camber | <input type="text" value="30"/> ° | <input type="text" value="0"/> ° |

[More angles](#)



| Axle no: 2 | Min | Max |
|--------------|--------------------------------------|---------------------------------------|
| Total toe | <input type="text" value="-1"/> mm/m | <input type="text" value="0"/> mm/m |
| Left Camber | <input type="text" value="-15"/> ° | <input type="text" value="15"/> ° |
| Right Camber | <input type="text" value="-15"/> ° | <input type="text" value="15"/> ° |
| Out of squar | <input type="text" value="0"/> mm/m | <input type="text" value="1.5"/> mm/m |



| Axle no: 3 | Min | Max |
|--------------|-------------------------------------|---------------------------------------|
| Total toe | <input type="text" value="0"/> mm/m | <input type="text" value="2"/> mm/m |
| Left Camber | <input type="text" value="-15"/> ° | <input type="text" value="15"/> ° |
| Right Camber | <input type="text" value="-15"/> ° | <input type="text" value="15"/> ° |
| Out of squar | <input type="text" value="0"/> mm/m | <input type="text" value="1.5"/> mm/m |
| Parallellism | <input type="text"/> mm/m | <input type="text"/> mm/m |

Vehicle configurations are used to present the operator with information regarding limits.



Add a new custom vehicle specification.




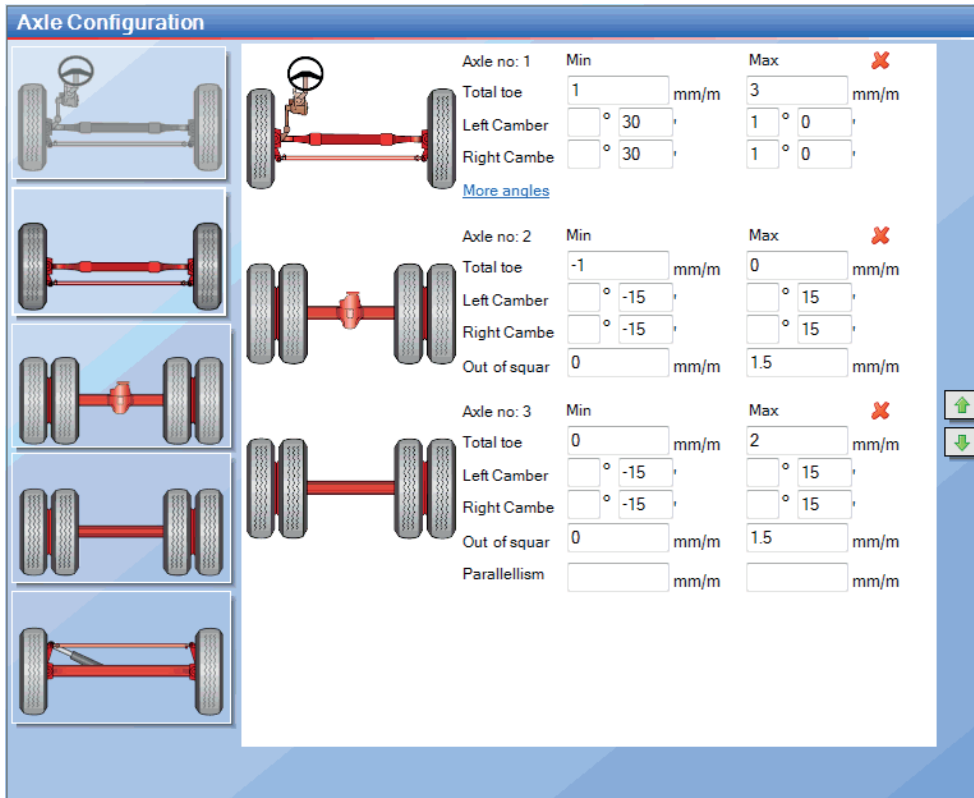
Edit a custom vehicle specification (Only accessible with administrator rights)



Delete a custom vehicle specification (Only accessible with administrator rights)

New Vehicle Configuration

Click on  in the vehicle configuration window to access the New Vehicle Configuration window. Enter the configurations for all the axles.



Axle Configuration

| Axle no: | Min | Max |
|-----------------------------|---------|----------|
| Axle no: 1 | | |
| Total toe | 1 mm/m | 3 mm/m |
| Left Camber | ° 30 | ° 0 |
| Right Camber | ° 30 | ° 0 |
| More angles | | |
| Axle no: 2 | | |
| Total toe | -1 mm/m | 0 mm/m |
| Left Camber | ° -15 | ° 15 |
| Right Camber | ° -15 | ° 15 |
| Out of squar | 0 mm/m | 1.5 mm/m |
| Axle no: 3 | | |
| Total toe | 0 mm/m | 2 mm/m |
| Left Camber | ° -15 | ° 15 |
| Right Camber | ° -15 | ° 15 |
| Out of squar | 0 mm/m | 1.5 mm/m |
| Parallellism | mm/m | mm/m |

The information fields are used to fill in corresponding fields in Vehicle and Order forms and they are also used to print out manufacturer and model information in the head of the report sheet.

Vehicle Type:
 Truck

Steering
 Left
 Right

Manufacturer:
 Volvo

Model:
 FH 16

Model Year:





NOTE: THE CONFIGURATION NAME WILL BE GENERATED AUTOMATICALLY IF NOT ENTERED MANU-ALLY IN THE CONFIGURATION NAME BOX.

*Configuration Name

Axle Configuration

Axle Configuration

| Axle no: | Min | Max |
|-----------------------------|---------|----------|
| Axle no: 1 | | |
| Total toe | 1 mm/m | 3 mm/m |
| Left Camber | 30 ° | 0 ° |
| Right Camber | 30 ° | 0 ° |
| More angles | | |
| Axle no: 2 | | |
| Total toe | -1 mm/m | 0 mm/m |
| Left Camber | -15 ° | 15 ° |
| Right Camber | -15 ° | 15 ° |
| Out of squar | 0 mm/m | 1.5 mm/m |
| Axle no: 3 | | |
| Total toe | 0 mm/m | 2 mm/m |
| Left Camber | -15 ° | 15 ° |
| Right Camber | -15 ° | 15 ° |
| Out of squar | 0 mm/m | 1.5 mm/m |
| Parallellism | mm/m | mm/m |

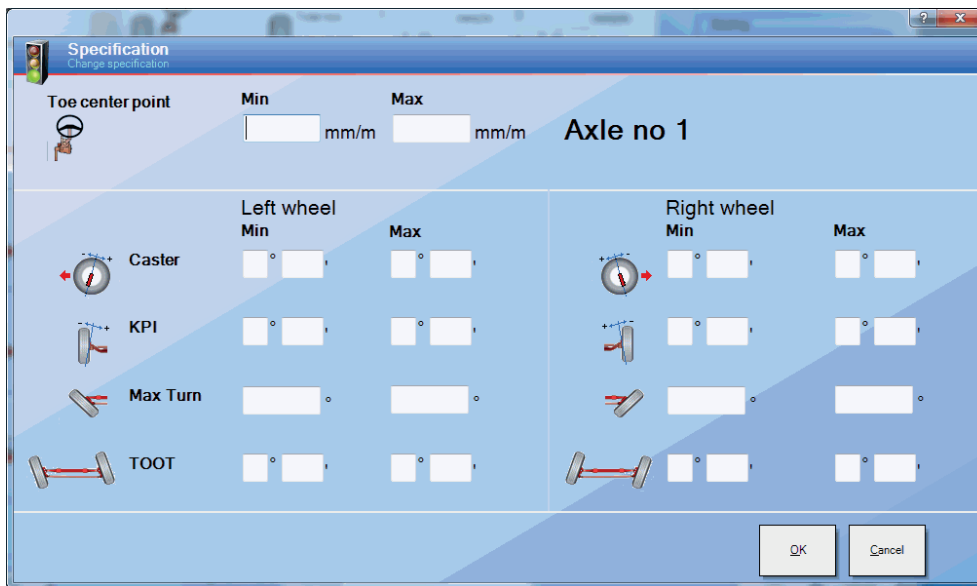
To create a specific axle configuration click on the required axle  in the area to the left. The Chosen axle will then be added to the area to the right. Create the axle selection starting with the rear and ending with the front. The order of the axles can be changed by clicking on the arrows  (for up),  (for down). To delete an axle click on the button .

Specifications for:

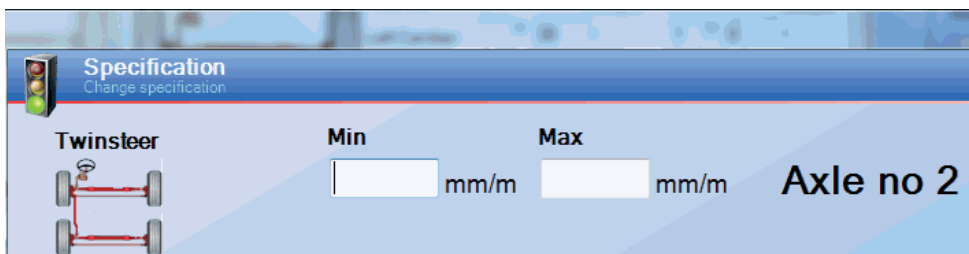
- Toe
- Camber
- Out of Square
- Parallelism

Click on “More angels “ to add:

- Steering box position
- Twinsteer parallelism
- Caster
- KPI (King Pin Inclination)
- Maximum wheel turn
- TOOT (Toe Out On Turns)



NOTE: SOME AXLE TYPES ARE DISABLED DEPENDING ON VEHICLE TYPE, I.E. STEERING AXLES ARE NOT AVAILABLE ON TRAILERS, AS WELL AS A TRUCK IS ONLY ALLOWED TO HAVE 1 AXLE WITH STEERING WHEEL.



Manufacturers

All information related to the existing vehicle manufacturers and models is displayed and can be edited under the vehicle tab. When you select a manufacturer from the models connected to the manufacturer will also be displayed.



.Add a new manufacturer.



Edit a new manufacturer (Only accessible with administrator rights)



Delete manufacturer (Only accessible with administrator rights)

Configuration

The configuration tab contains the settings for Homebase and the plugin i-track - please refer to the separate Configuration section for more information page 27.

Tire information

All information related to tire sizes are displayed here and can be:



Add a new tire specification.



Edit a tire specification (Only accessible with administrator rights).



Delete a tire specification (Only accessible with administrator rights).

Rearrange the order of which the tires are presented by clicking on:



Edit or New

You can change (edit) or create (new):

- A name (tire designation) with which the tire is presented in the vehicle definition wizard and tire list.
- A wheel diameter, must be entered in mm.
- A position in the drop down list. Use this to sort the tire sizes so that the most common used tire sizes are high up in the drop down list.

Wheelsize
Add wheelsize


Tire designation
255/70R22.5

Wheeldiameter (mm.):
813

Position in list
1

Cancel OK

Rearrange

Press the  or  to move the tire size up or down the list.

Wheelsize
Rearrange wheelsize

| | | |
|---|-------------|---|
| ↑ | 255/70R22.5 | ↓ |
| ↑ | 275/70R22.5 | ↓ |
| ↑ | 275/80R22.5 | ↓ |
| ↑ | 295/75R22.5 | ↓ |
| ↑ | 295/80R22.5 | ↓ |
| ↑ | 315/80R22.5 | ↓ |
| ↑ | 275/70R22.5 | ↓ |
| ↑ | 385/65R22.5 | ↓ |
| ↑ | 425/65R22.5 | ↓ |
| ↑ | 445/65R22.5 | ↓ |
| ↑ | 11R22.5 | ↓ |
| ↑ | 12R22.5 | ↓ |
| ↑ | 275/70R22.5 | ↓ |

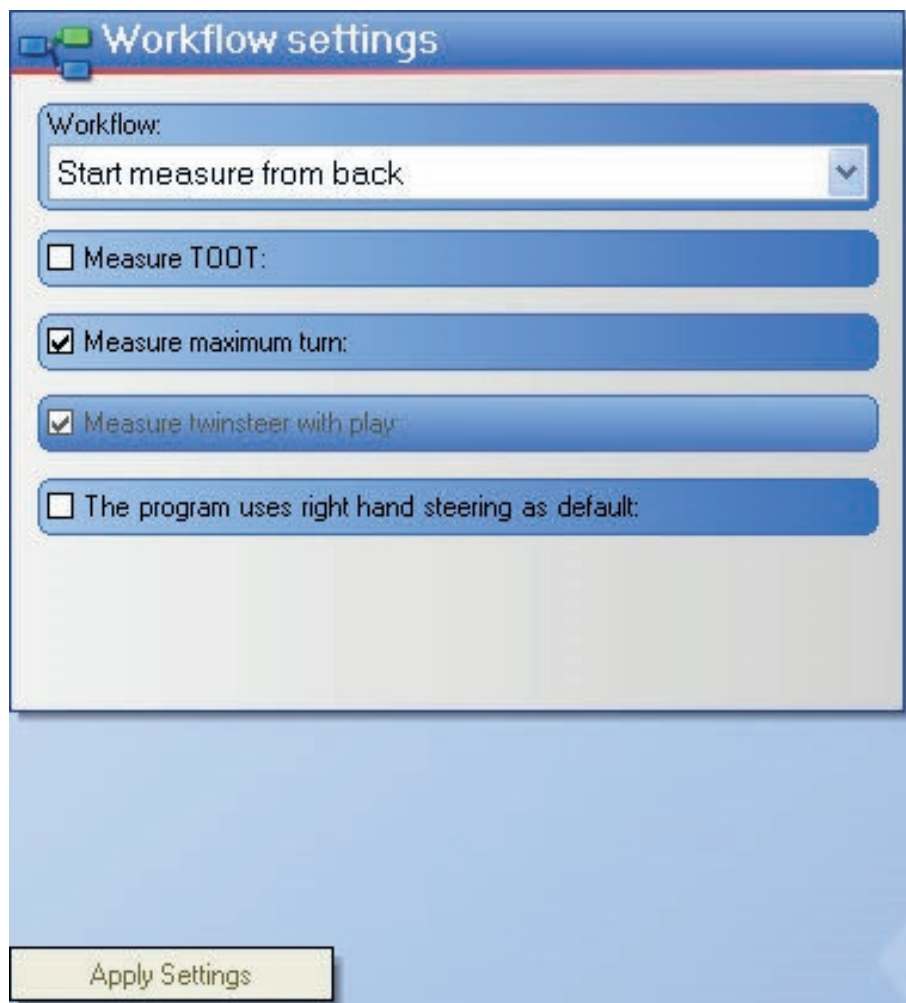
Cancel OK

Configuration

The configuration tab contains the settings for Homebase and the plugin i-track.

Work flow

Sets the type of measurement and the measurements work flow.



Workflow settings

Workflow:
Start measure from back

Measure TOOT:

Measure maximum turn:

Measure twinsteer with play:

The program uses right hand steering as default:

Apply Settings

Workflow:

Start measuring from rear [default] of the vehicle.

Measure TOOT (Toe Out On Turns):

Check this box if the measurement flow of all wheel angles should include the TOOT measurement. This measurement box is not by default ticked.

Measure Maximum turn:

Check this box if the measurement flow of all wheel angles should include the measurement of maximum wheel turn. This measurement is optional for the measurement of trucks. This measurement box is by default ticked.

Measure Twinsteer with play:

Check this box for the measurement of twinsteer with play. This process will take longer but the result will be more accurate depending on less play in the linkage.

Left or right hand drive as default:

Check this box right hand drive is required as default.

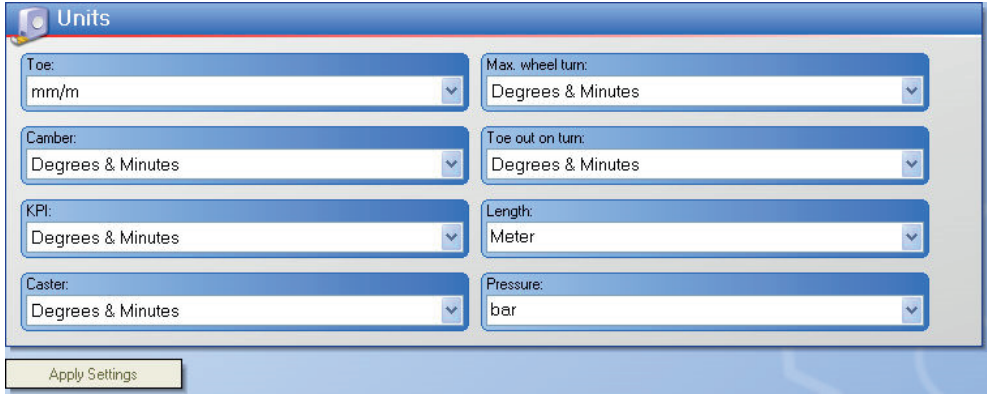
When all changes are implemented, click



Units

Select units (mm/m, Degrees & Minutes, Decimal Degrees, etc.) in which the measurements will be displayed. The setting for toe units is also available in the i-track plugin.

Click the apply settings



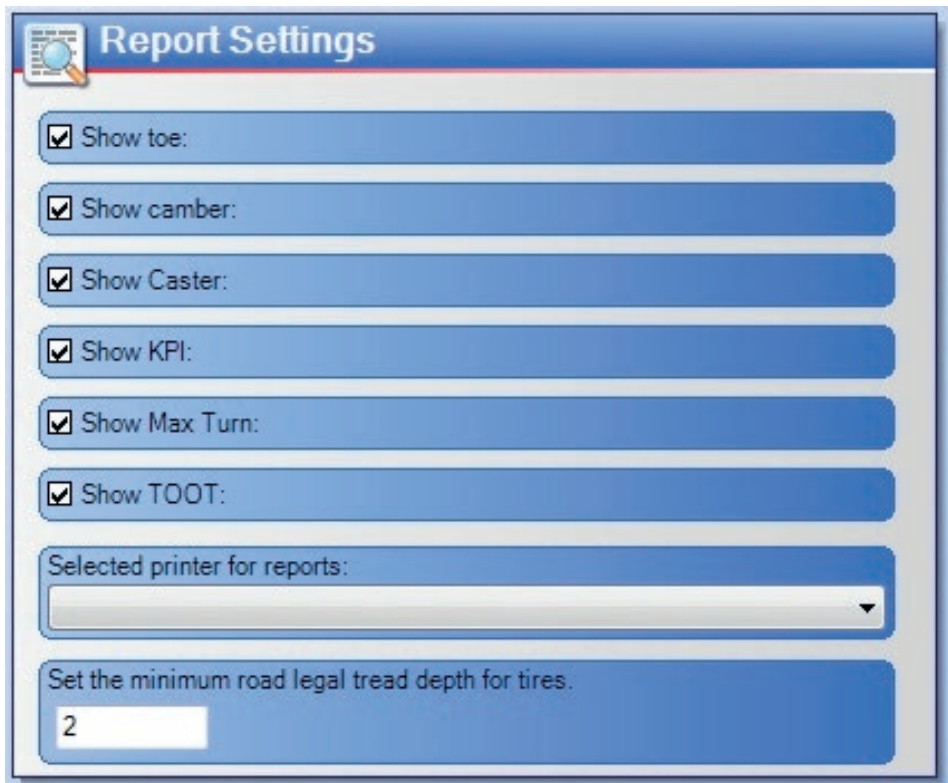
Reports Settlings

Select the measurement results to be displayed in the report. Choose the default printer. When no printer is selected the software select the default windows printer.

Click the Apply Settings




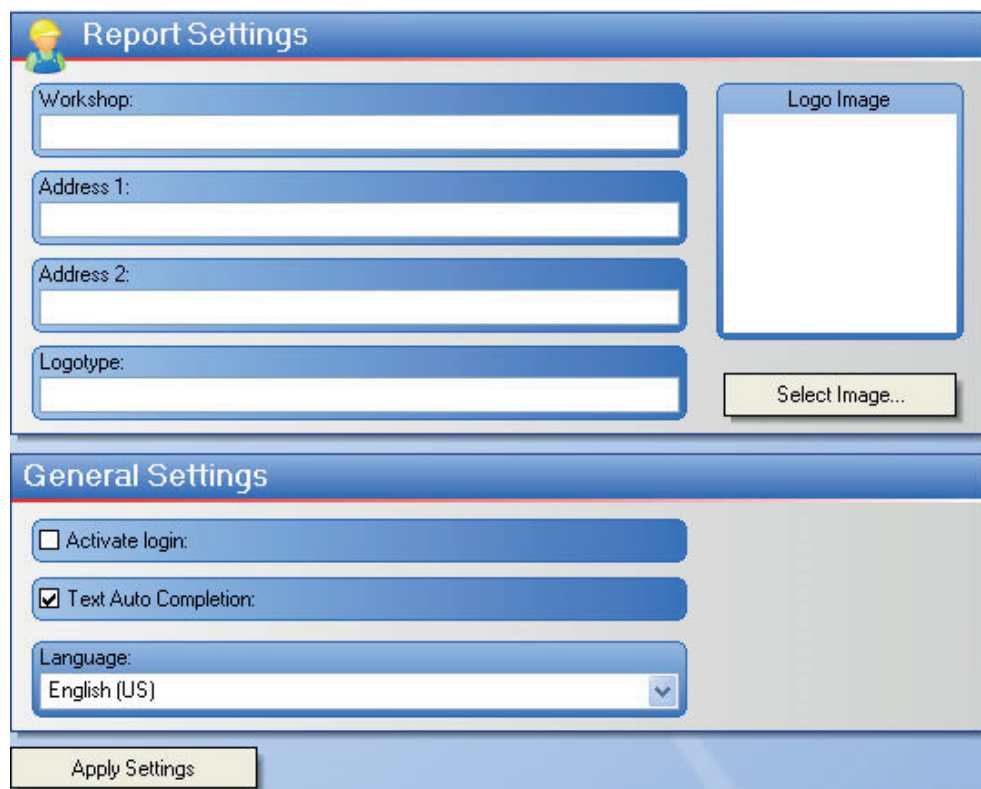
button to activate the changes.



Customization

Enter workshop information and logo to be displayed on the header.

Click on  to import a logotype.



The screenshot shows two configuration panels. The top panel, titled "Report Settings", contains four text input fields: "Workshop:", "Address 1:", "Address 2:", and "Logotype:". To the right of these fields is a "Logo Image" placeholder box and a "Select Image..." button. The bottom panel, titled "General Settings", contains three options: "Activate login:" with an unchecked checkbox, "Text Auto Completion:" with a checked checkbox, and "Language:" with a dropdown menu currently set to "English (US)". An "Apply Settings" button is located at the bottom of the General Settings panel.

NOTE: YOU MIGHT HAVE TO EDIT THE LOGOTYPE IN A EXTERN IMAGE EDITING SOFTWARE IF THE ASPECT RATIO DOES NOT FIT AND THE LOGOTYPE IS NOT SCALED CORRECTLY, OR IF YOUR LOGOTYPE IS NOT SAVED AS (*.BMP, *.JPG*, *.PNG).

General Settings

Activate login:

A login prompt will be displayed. The user rights will be displayed ie. if the user has administrator rights.

Text Auto Completion:

When entering data, the software automatically will display the first customer, vehicle, etc.

Language:

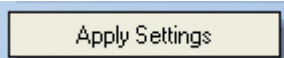
Select Hombase user language.



The screenshot shows a dropdown menu with the label "Language:". The selected option is "English (US)".

Apply Settings

Click the Apply Settings button to activate the changes.



Blank Page

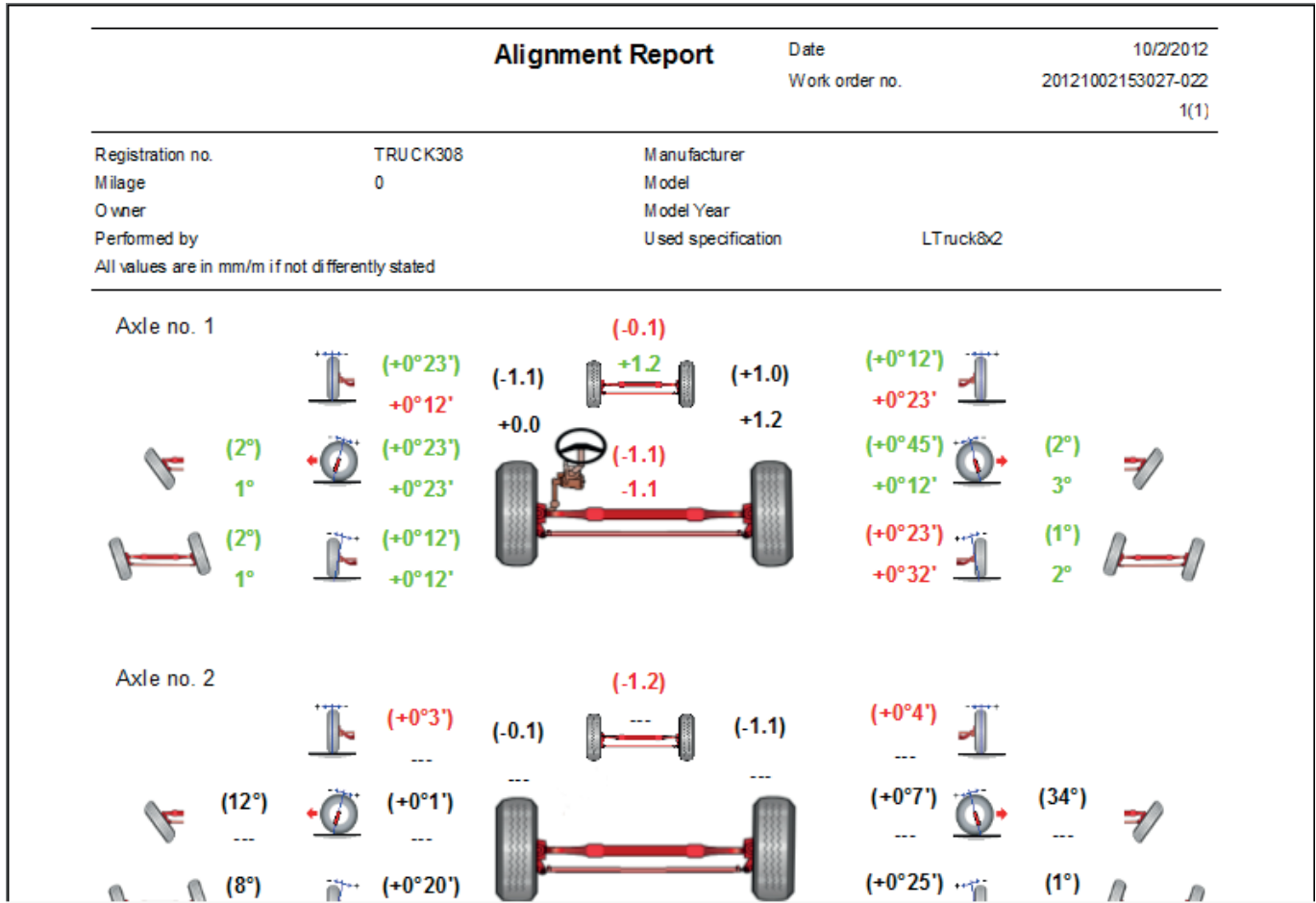
Report and Preview

The report can be printed in 3 different formats.

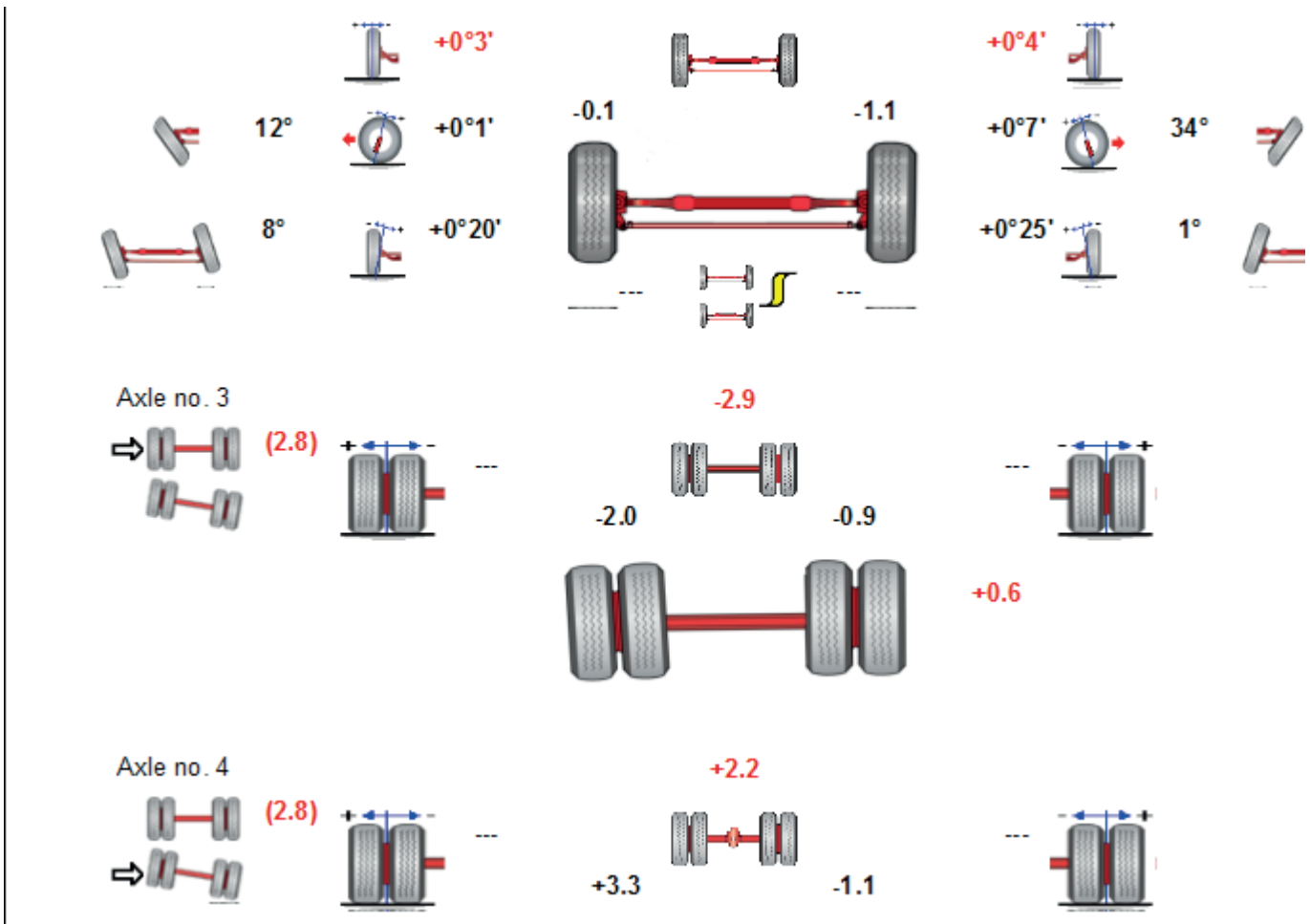
Text

| Alignment Report | | | | | | | | | |
|---|------------|------------------|------------|--------------------|--------------------|------------|-------------------|-------------------|--------------------|
| | | | | | | | | Date | 10/2/2012 |
| | | | | | | | | Work order no. | 20121002153027-022 |
| | | | | | | | | | 1(1) |
| Registration no. | TRUCK308 | | | Manufacturer | | | | | |
| Milage | 0 | | | Model | | | | | |
| Owner | | | | Model Year | | | | | |
| Performed by | | | | Used specification | | | | | |
| | | | | | | | | LTruck&x2 | |
| All values are in mm/m if not differently stated. Values in parenthesis are before measurements | | | | | | | | | |
| Axle no. 1 | Min | Left side | Max | Min | CenterPoint | Max | Min | Right side | Max |
| Toe | -- | (-1.1) | -- | | (-1.1) | | -- | (+1.0) | -- |
| | | +0.0 | | +3.0 | -1.1 | +4.0 | | +1.2 | |
| Camber | +0°20' | (+0°23') | +0°30' | Total toe | | | +4°0' | (+0°12') | +6°0' |
| | | +0°12' | | | | | | +0°23' | |
| Caster | +0°12' | (+0°23') | +0°23' | +1.0 | (-0.1) | +3.0 | +1°2' | (+0°45') | +1°4' |
| | | +0°23' | | | +1.2 | | | +0°12' | |
| KPI | +0°12' | (+0°12) | +0°23' | | | | +10°0' | (+0°23') | +20°0' |
| | | +0°12' | | | | | | +0°32' | |
| Max turn | 1° | (2°) | 3° | | | | 2° | (2°) | 5° |
| | | 1° | | | | | | 3° | |
| Toe out on turn | 1° | (2°) | 3° | | | | 1° | (1°) | 3° |
| | | 1° | | | | | | 2° | |
| ----- | | | | | | | | | |
| Axle no. 2 | Min | Left side | Max | Min | Max | Min | Right side | Max | |

Graphical



Separate (Measurement before and after adjustment)



When used, specifications are printed with the values in the text report. The values can be viewed in a preview before printing. The report can be exported to PDF, Word or Excel Note. Export to Word or Excel is not recommended.

Functions for, moving between pages, printing, zooming are located in the tool bar:



NOTE: TO SELECT WHICH VALUES ARE TO BE DISPLAYED IN THE REPORT SEE SECTION NAVIGATOR.

Blank Page

I-track



homebase

Blank Page

Getting Started [I-track]

These operating instructions describe the handling, function and components for i-track.

NOTE! CHECK THE CALIBRATION OF YOUR MEASURING HEADS REGULARLY USING MEASURING HEAD COMPARE.

NOTE! CHECK THE CALIBRATION OF YOUR WORK BAY REGULARLY, SEE INSTRUCTIONS IN THE INSTALLATION GUIDE.

NOTE! CHECK THE REST OF THE EQUIPMENT REGULARLY FOR DAMAGES AND PLAY THAT CAN AFFECT THE MEASUREMENTS ACCURACY.

Operating the system

i-track, together with Homebase installed on a PC, is a measuring equipment designed for wheel alignment.

i-track consists of Homebase software, two measuring heads and four scales, as well as equipment to measure trailers and semi-trailers. The measuring heads are battery powered and will last for a normal working day.

i-track uses advanced laser technology which results in accurate and repeatable measurements.

i-track uses Bluetooth® radio communication between the PC and the measuring heads.

i-track measuring results are saved on the hard disc of the PC and can be printed out when the PC is connected to a printer.

NOTE! FOR TRUCKALIGNER AND I-TRACK PLUGIN MAKE SURE TO SWITCH OFF POWER SAVING ALTERNATIVES SINCE IT CAN BLOCK THE USB PORT USED FOR THE BLUETOOTH CONNECTION.



NOTE! MAKE SURE THE PC USES THE CORRECT BLUETOOTH MODULE AND DRIVERS TO ENSURE THE BLUETOOTH COMMUNICATION.

NOTE! MAKE SURE THAT THE BLUETOOTH MODULE CAN COMMUNICATE FREELY, DO NOT PLACE IT INSIDE A CABINET, ALWAYS OUTSIDE.

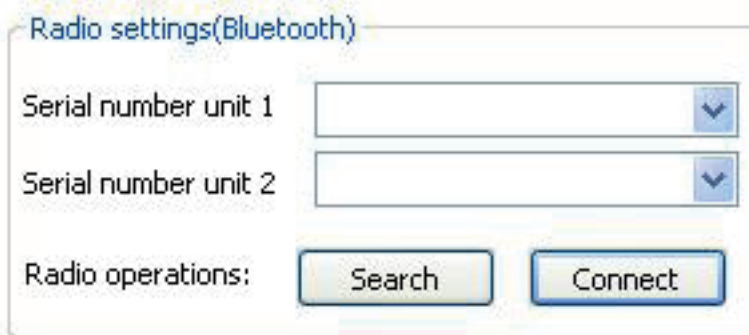
Using the system for the first time

Connection / Disconnection

Start by switching on the two measuring heads.

Then to connect the measuring heads access i-track . If the software can't connect to the selected measuring heads it will automatically switch to Setup .

In the setup you will find the radio settings (Bluetooth) where you can search, choose and connect the measuring heads.



Radio settings(Bluetooth)



Serial number unit 1

Serial number unit 2

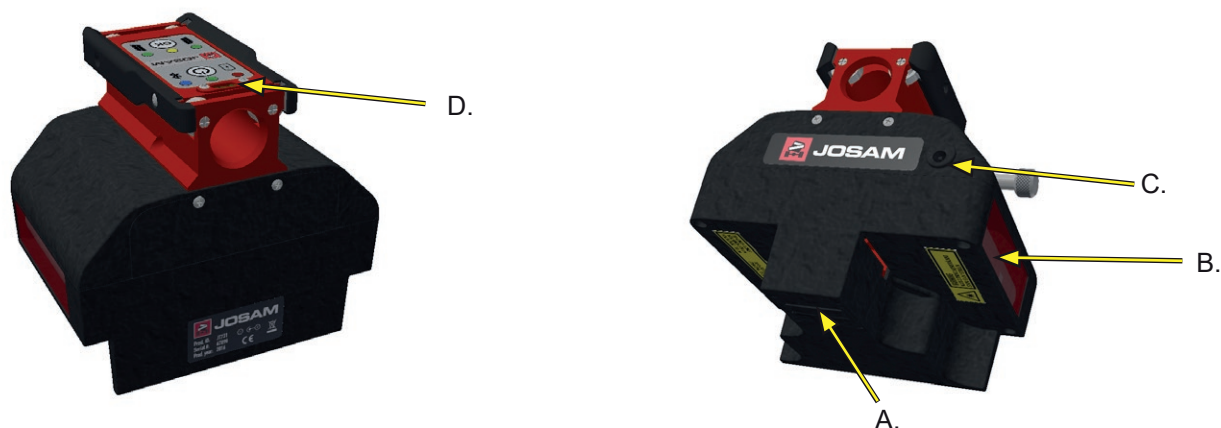
Radio operations:

NOTE: SOME TIMES YOU MAY HAVE TO SEARCH MORE THAN ONCE TO FIND THE MEASURING HEADS.

Short steps to perform a measurement

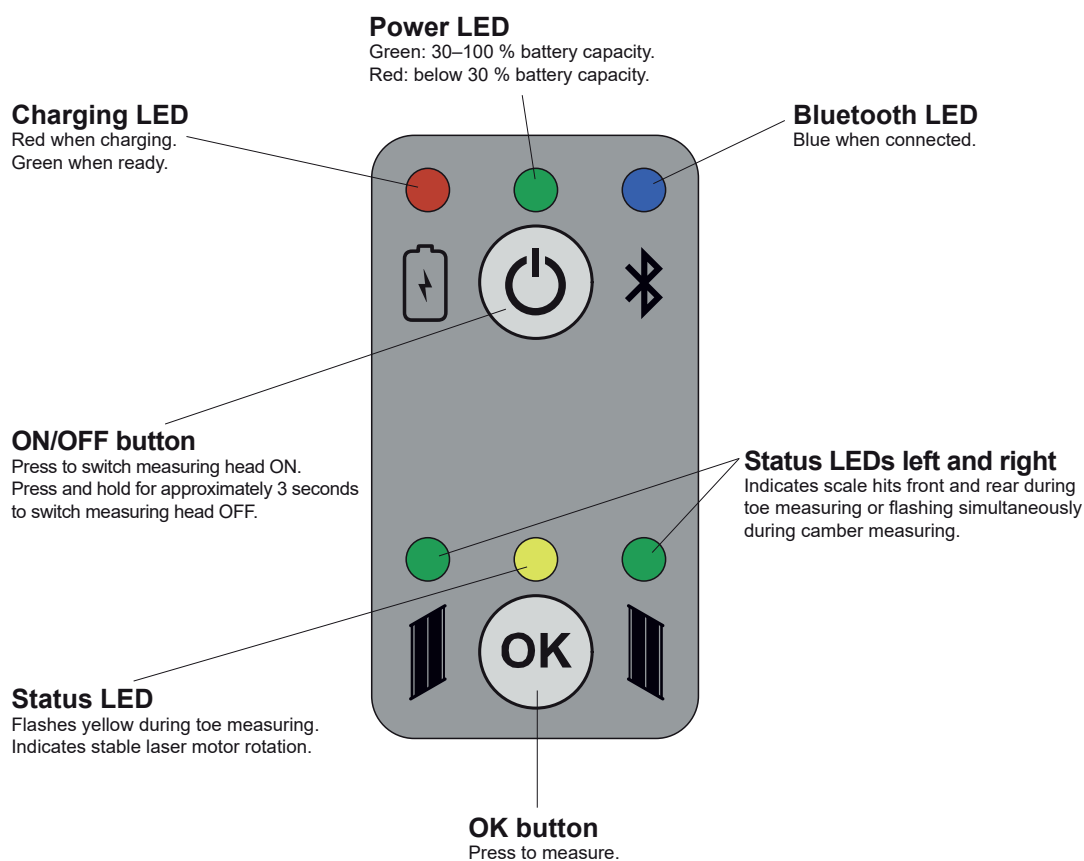
1. Perform the Pre operative checks before continuing with any measurement.
2. Select Quick start in Homebase to start a measurement without any additional information or create a new work order in Homebase with all options you want. See the Homebase section for further information.
3. Drive the vehicle into the measuring space so that the front of the vehicle is pointing to the scales marked **FRONT UP**.
4. Mount a wheel adapter on each wheel of the vehicle, when necessary also place the scales in the correct position (left front, right front, left rear and right rear). For measurement of trailers and semi-trailers see separate instructions.
5. Proceed through the vehicle definition wizard.
6. Perform a measurement of all axles before adjustment  according to the instructions on the display.
7. Adjust the wheel- and axle alignment using i-track.
8. Perform a measurement after adjustment. 

Measuring Head



A. Protection cover B. Receiver C. Charger connector D. Bubble

Buttons and LED's on measuring unit



The measuring head is powered on with the ON/OFF button and should be kept switched on. The measuring head should be connected to a charger at (C), when not in use. Cover (A) is located under the measuring head.

Located on the top of the measuring heads are three LEDs: green, yellow, green.
The OK button is used during operation to confirm process steps.

Battery


The measuring heads are supplied with Li-Ion batteries. When the control unit is not in use it shall be kept with a charger connected to the charger connector.

NOTE: LI-LON BATTERIES ARE NOT ENVIRONMENTALLY FRIENDLY AND SHOULD BE DISPOSED OF ACCORDING TO LOCAL REGULATIONS.


NOTE: CHARGING ONLY ALLOWED IN OFFICE ENVIRONMENT.

Trouble Shooting

If there are any problems there are a few alternatives that can be used to diagnose the system.

To access these systems click on  in the setup menu.

Click on Diagnose  to check the system.

Click on to  compare or calibrate the measure heads.

The measuring head is malfunctioning.

Symtoms: The yellow LED malfunctions.
 The green LED flashes at a slower rate than normal.

To resolve the problem: Restart the unit.
 If the problem persists, send the measuring head to service for replacement.

Technical Data Information



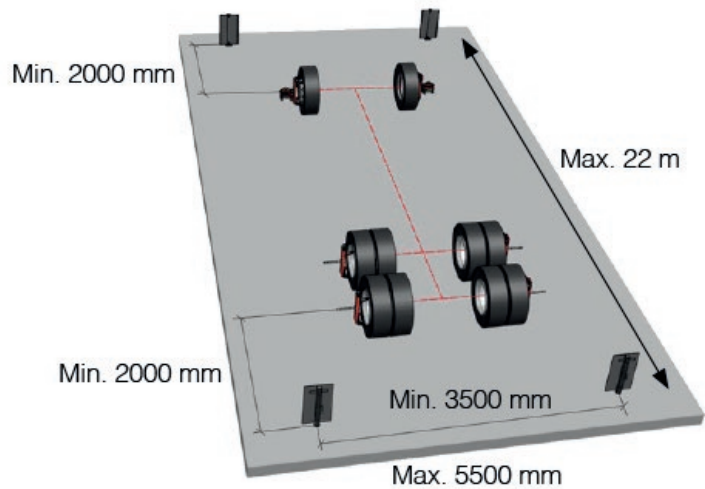
Every measuring head is marked with a serial number, a CE and ETL symbol that certifies that the product is approved.



The batteries are of Li-Ion type and not environmentally friendly, and should be disposed of accordingly.



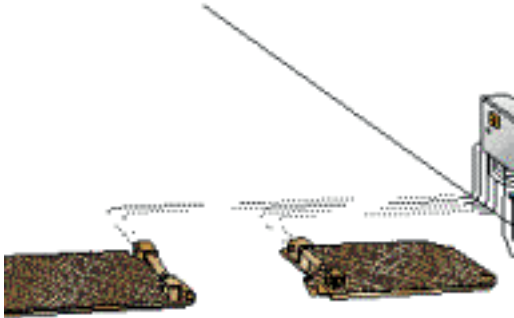
| Description | Specification |
|---------------------------|----------------------------|
| Measuring range | |
| Toe | $\pm 25^\circ$ |
| Camber | $-5^\circ \dots +10^\circ$ |
| Caster | $\pm 20^\circ$ |
| KPI | $\pm 20^\circ$ |
| Max. turn | 60° |
| Measuring accuracy | |
| Toe | $\pm 0,25 \text{ mm/m}^*$ |
| Camber | $\pm 3 \text{ min}^*$ |
| Operational time | 12 h** |
| Charging time | 5 h |
| Laser | Class 2 |



Measurement Preparations

Pre-measurement checks

Before carrying out any measurements check, with the help of play detectors, that the vehicle has no excess play in the bushings and steering linkage.



The following items should be checked before performing wheel and axle measurements:

- 1. Tire pressure:**
Tires (are the correct tires assembled or are different types of tires mounted on the same axle?).
- 2. Bearing play:**
Unnecessary play in kingpins, steering gear, and the balancing arms support on support axle vehicles.
- 3. The attachment of the axles:**
(Play in spring-eye bolts, shackles, broken centre rivets, broken springs and loose spring straps.)
- 4. Worn torsion bar bushings**

NOTE: IF ANY OF THE ABOVE MENTIONED POINTS ARE NOT CORRECT, THESE SHOULD BE FIXED BEFORE PROCEEDING WITH THE MEASUREMENTS.

Connection

Assemble the wheel adapter to all wheels on the vehicle.

Assemble the measuring heads on the rear axle.

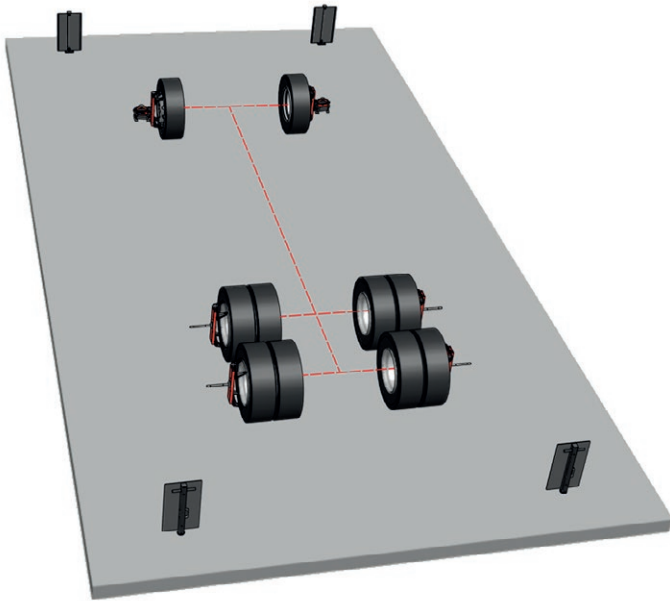


Scales and gauges mounted in the workshop

When using mobile scales, place the according the correct position:

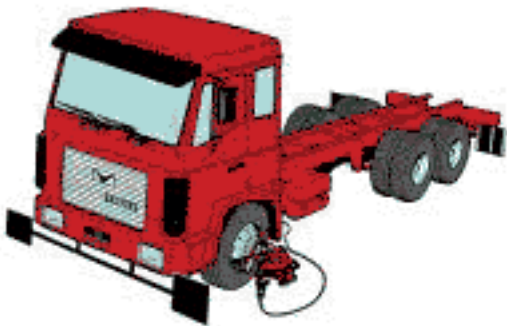
- Left front
- Left rear
- Right front
- Right rear

For vehicle types other then (semi-) trailer make sure the front of the vehicle is positioned facing the front scales.

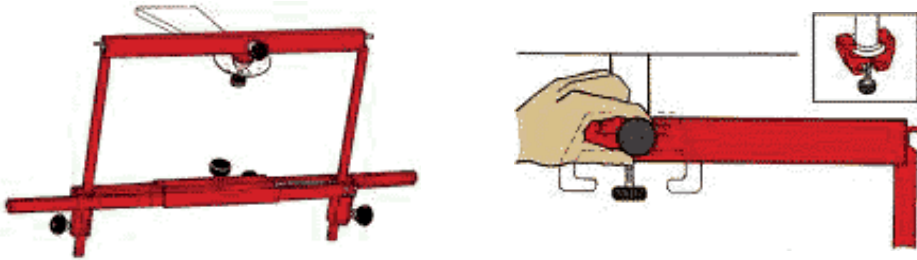


Scales and gauges mounted on the vehicle

Assemble the self-centering measuring gauges, gauge extensions and the scales at the front and at the rear of the vehicle.



For trailers or semi-trailers, use the special clamp for tow eyelet or kingpin.

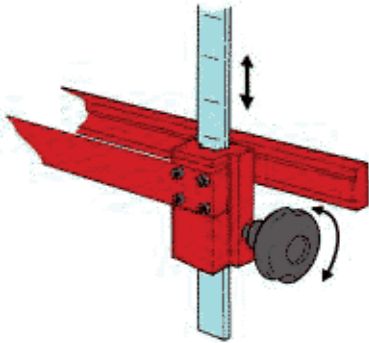


Windy environment

When measuring in a windy or drafty environment, attach the stabilizer bracket to the hangers and secure to the chassis frame. This will prevent swaying and vibration.

Adjustment of self centering gauges

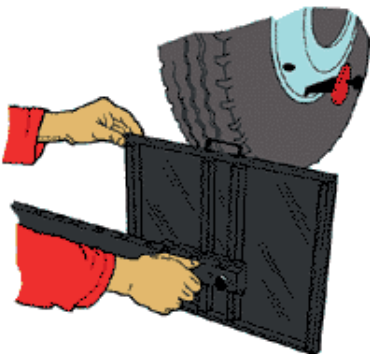
Use the adjusting device on the self-centering gauges to adjust until the extensions are horizontal. Check the spirit level on gauge extension.



Adjustment of target scales

Position the target scale and the measuring head so that they face each other center to center. Notice **numerical markings** on the extensions, note the reading indicated on the inner edge of the target scale. The reading should be the same for all scales when assembled.

Adjust the height of the target scale so that its center is positioned at the same level as the lower edge of the measuring head. Position the other target scales at the same height and reading as the first target scale.

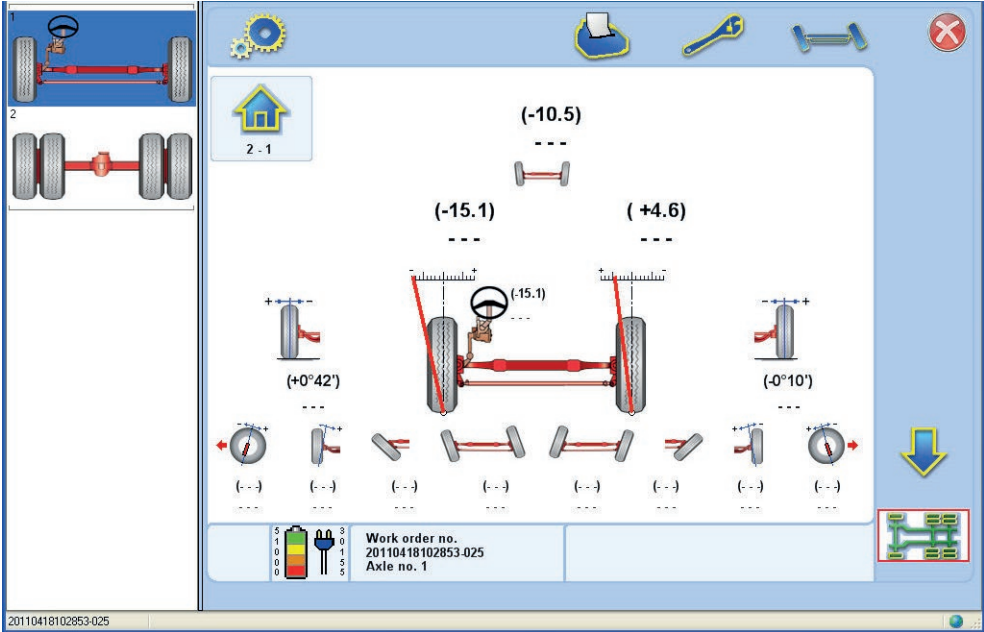


Measurement preparations are now completed and the system is ready to start measuring.



Do not alter the position of the self centering measuring gauges, while measuring procedure is in progress. (The accuracy of the system depends on the position of the axle in relation to the target scales).

Main

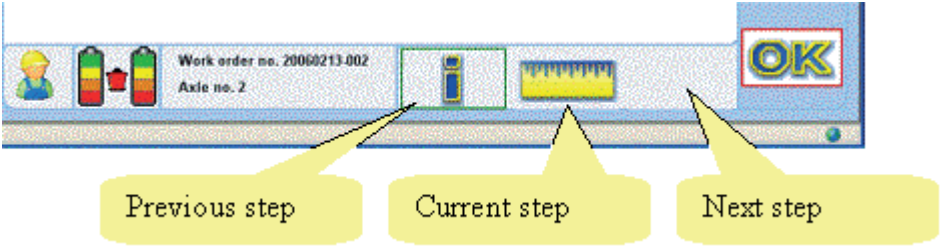




The main menu is the “hub” of the i-track software. All main functions such as measuring, printing and setup can be accessed directly from this menu.

The main menu is connected to a work order number (displayed at the bottom of the screen) which is automatically generated or chosen by the user.


Measure all axles of the vehicle by following the instructions on the screen, the software will automatically detect when the measuring heads are moved and saves the result separately for each axle. For measurement of trailers and semi-trailer see separate instructions.





The strip at the lower end of the window informs you of the previous, current and next step in the procedure.



Normally the software automatically starts by measuring the vehicle before adjustment , but when it can not connect to the measuring heads the software will switch to the setup menu. The operator can then check the settings. When returning from the settings menu  press to measure before adjustment.

After measurement the results per axle are displayed. Move from axle to axle using the arrow buttons 

 (or choose the axle in the menu to the left). The measuring results 'Before adjustment' are shown within parentheses (x.xx), after adjustment without parentheses.

Adjust mode for the selected axle can be accessed by pressing . Press  for measurement after adjustment. Press  for measurement of steering angles or  for Twinsteer measurement.

Menu Icons



Setup

Setup button displays the setup menu.



After adjustment

Switch to after adjustment mode.



Before adjustment

Switch to before adjustment mode.



Adjust menu

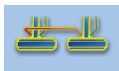
Adjust button enters the adjust axle menu.

This icon is only displayed when the axle has been measured "Before adjustment".



Measure steering angle menu

Enter the steering angle menu for the measurement of caster, KPI, TOOT and max. turn. Visible only on steering axles.



Twinsteer axles menu

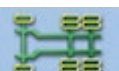
Measures the parallelism of 2 steering axles. The angles are measured by using the toe values.

This icon is only displayed when there are two steering axles after each other.



Up and down

The up and down buttons are used to scroll through the measured axles displayed in the window. These icons are only visible when more than one axle is measured.



OK/after adjustment

Enters after adjustment measuring mode for the axle displayed. OK icon is only visible when an axle has been measured..

Configuration

The configuration menu contains the settings for the i-track plug-in. There are more settings found here than in Homebase configuration tab.

| Settings | | Flow | |
|-----------------------|---------------------|----------------------|-------------------------------------|
| Start measuring from | Back | Measure max turn | <input checked="" type="checkbox"/> |
| Toe Units | Radians (mm/m) | Adjust camber | <input checked="" type="checkbox"/> |
| 180 method | Manual | Adjust camber driven | <input checked="" type="checkbox"/> |
| Length units | Meters | | |
| Measure max turn with | Camber | | |
| Twinsteer | Do not measure play | | |
| Scale Type | Large scales | | |

| Radio settings(Bluetooth) | | | |
|---------------------------|---------------------------------------|--|--|
| Serial number unit 1 | | | |
| Serial number unit 2 | | Status | Search finished |
| Radio operations: | <input type="button" value="Search"/> | <input type="button" value="Connect"/> | Demo <input checked="" type="checkbox"/> |

The settings in this section are used for controlling the behavior of the i-track plug-in.

Start measuring from:

Select measurement start from the front or back of the vehicle. The software will always sort the axles by distance to the front scale, the axles can then be measured as preferred.

Toe units:

Toe (left, right and total), out of square, parallelism and steering box position are presented in the selected unit.

180 method:

Select automatic or manual. In automatic mode the software indicates when the wheels have been rolled 180°, in manual mode the operator has to confirm that the wheels have been rotated 180°.

Length units:

Select how distance to the scales is displayed in the selected unit.

Measure Max. turn with:

Camber is by default chosen to measure max turn. This is because the path between the scales and the measuring head may become obstructed and cause the measuring head to lose sight of the scales.

If selecting toe, an axle extension may be required.

Twinsteer:

By default we recommend to measure the play in the linkage when aligning twinsteer. Using this method the second wheel is aligned with the first wheel and the measured play in the linkage is divided equally to the left and right of the direction of the wheel. This method is more complicated than measuring without play but results in a much more accurate diagnosis and alignment.

Measure Max. turn:

Check this box if the measurement of all wheel angles should also normally include the measurement of Max. turn. During the flow you are able to bypass the measurement if needed.

Adjust Camber:

Check this box if the adjustment of axles should include adjustment of both camber and toe, if this is not checked the adjustment mode only displays Toe Adjustment.

Demo:

Check this box to run the software in demo mode. No measuring heads are needed.

NOTE: THAT THIS HAS NOT BEEN IMPLEMENTED IN ALL FUNCTIONS OF THE I-TRACK SOFTWARE.

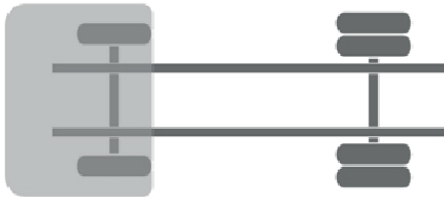
Measurement of a truck or bus

Conditions



Select scale setup for the coming measurement.

Scale options



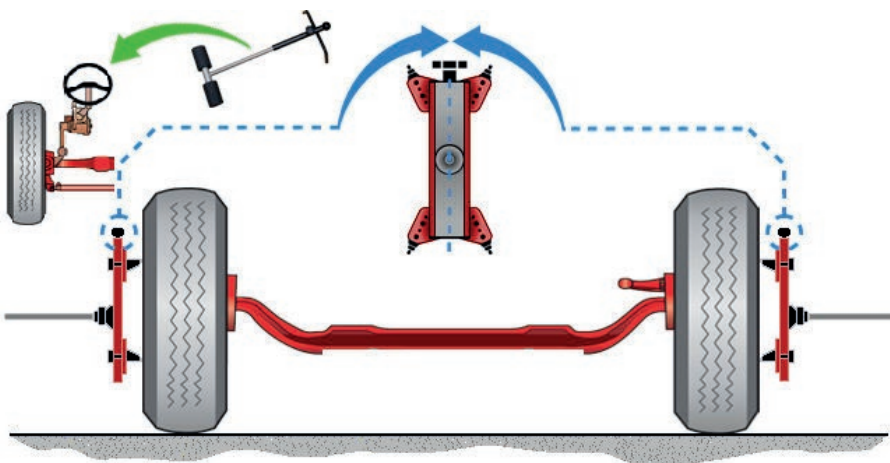
Scales are mounted on vehicle



OK

If the box remains unchecked, the software will assume that the scales are assembled in the workshop (i-track preferred setup) and that the vehicle is positioned with the front facing the scales. Press **[OK]**.

In the i-track measuring method all axles are measured simultaneously before adjustment. Place a wheel adapter with the knob pointing upwards on each wheel on the vehicle. Lock the steering wheel in the straight ahead position.

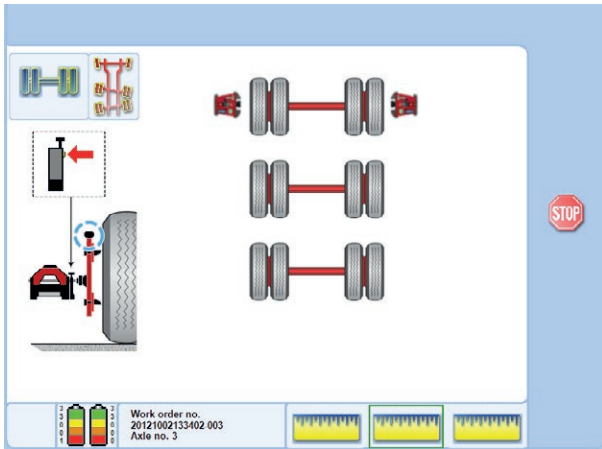


Measuring first time

Place the measuring head on the wheel adapter on the rear axle. Press the button on the measuring head to start the wheel position measurements for toe, and camber for that particular wheel. Repeat the process on the wheels on both sides of the axle, one at a time.

Up to 2 operators may measure at the same time using two measuring heads, one each wheel. Note that only one measuring head at a time can measure and collect data. The second measuring head is only activated once data sent from the first measuring head has been acknowledged by the PC. There is no specified measuring flow other than all wheels must be measured starting with the rear axle and progressing forward.

When all wheels have been measured the operator is instructed to roll the vehicle.



Roll the vehicle so that the wheels rotate 180°

During rolling the screen will display the roll distance. The software always displays the direction of which the vehicle is physically moving.



NOTE: FORWARD ROLLING IS RECOMMENDED. BACKWARD ROLLING IS ACCEPTED.



When the wheel has reached the required position the software will display a **STOP** sign.

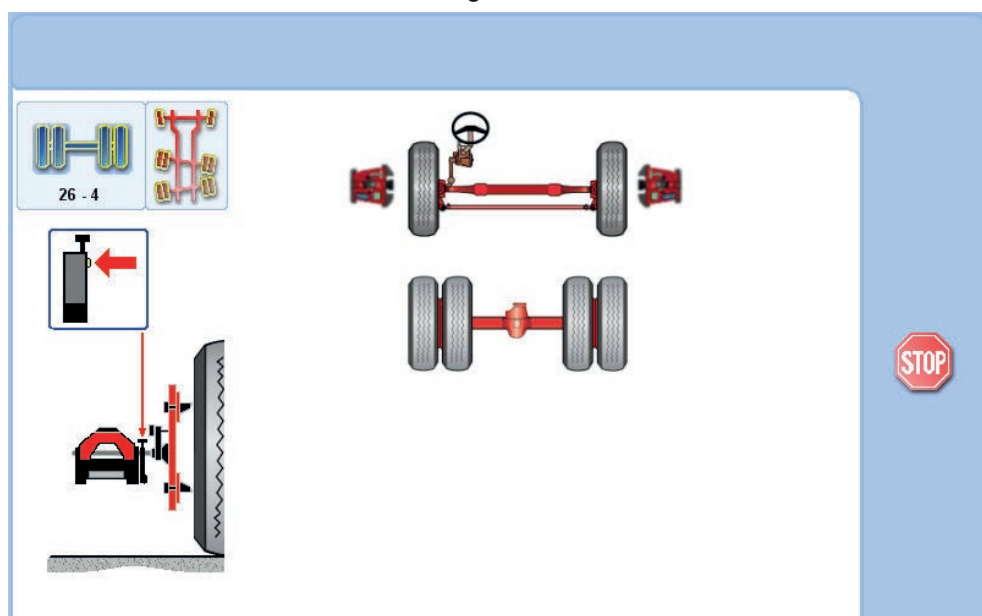
NOTE: FOR VEHICLES WITH VARYING TIRE SIZES, THE ROLLING PROCESS MUST BE PERFORMED IN TWO STAGES.

Choose the axle with the wheel diameter of which occurs the most on the vehicle. Raise the axles and roll the wheels 180°.

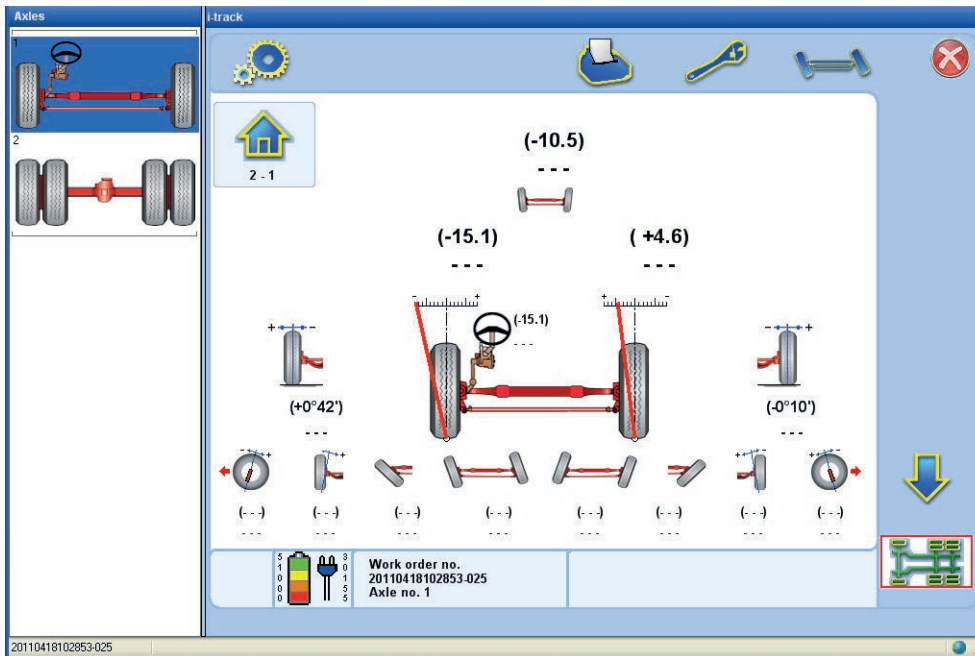
After the first rolling is complete, raise the axles with wheels of the second diameter and roll 180°

Perform a Second Measurement:

Perform a second measurement starting from the front.



After the second rolling, the software will display the Steering box position, Twinsteer alignment and the results for Toe, Camber, Out of Square, and Parallelism measurements.



Menu Icons



Main

Ends the measurement and returns to main menu.



Stop measuring

Interrupts the current step. Visible only when measurements are performed.

A stopped measurement can be re-established with the OK-button, or terminated by using the main-button. The measurement can be restarted from earlier or later steps by using the left- or right-button.



OK

The OK is used to step through the stages displayed in the results window.

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

Measurement of a (Semi-) trailer

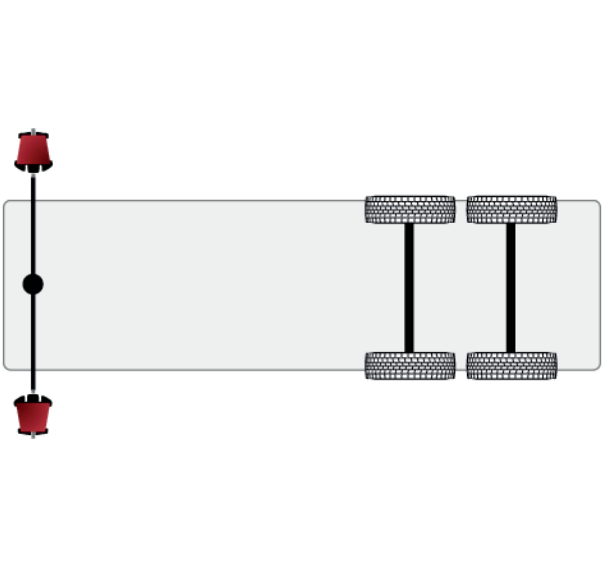
Conditions



Select scale setup for the coming measurement.

Check the box “Scales are reversed” when reversing into the work bay so that the front of the vehicle is pointing at the rear scales.

Scale options

A diagram showing a semi-trailer on a scale. The trailer is represented by a grey rectangle with a red hook and a black dot on the left side. The trailer is positioned on a scale with four wheels. The scale is shown as a grey rectangle with four wheels. The trailer is positioned on the scale with its front facing the rear scales. The scale is shown as a grey rectangle with four wheels. The trailer is positioned on the scale with its front facing the rear scales.

Scales are reversed

Scales are mounted on vehicle

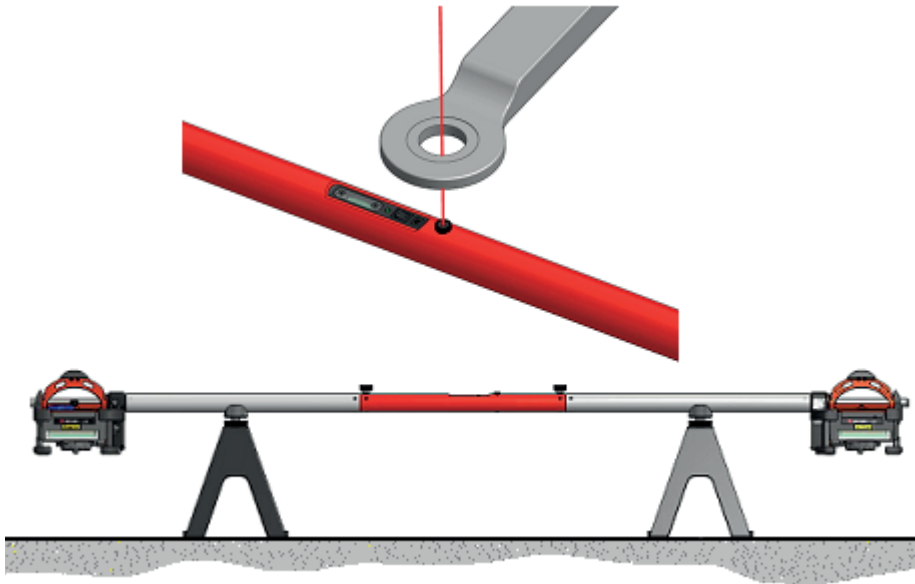
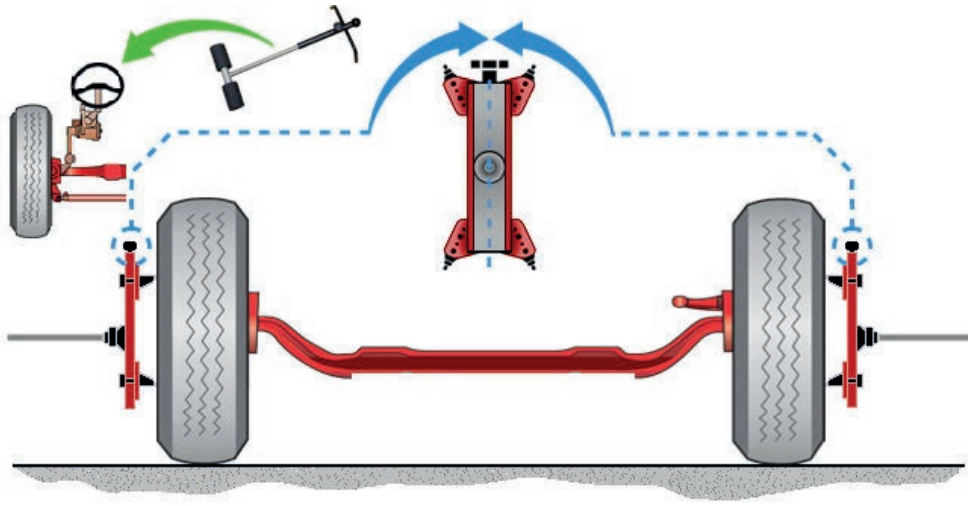
OK

If both the boxes remain unchecked, the software will assume that the scales are assembled in the workshop (i-track preferred setup) and that the vehicle is positioned with the front facing the scales.

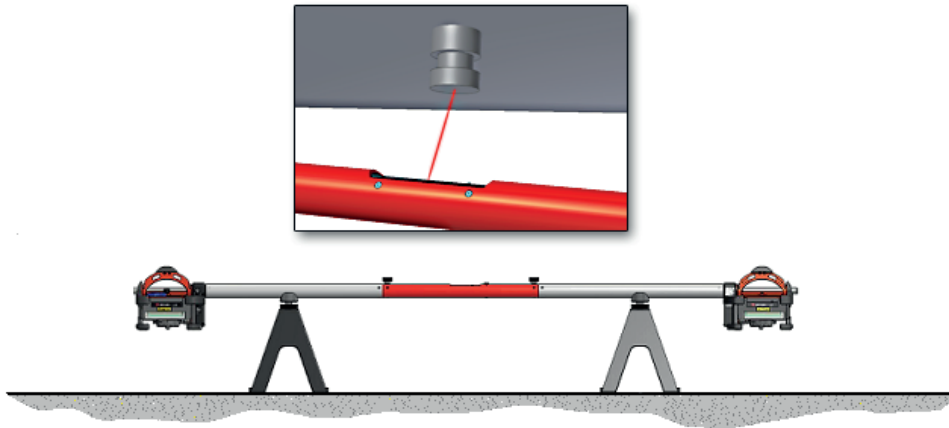
Press **[OK]**.

All axles are measured simultaneously before adjustment.

Place a wheel adapter with the knob pointing upwards on each wheel of the vehicle and lock the steering wheel in straight ahead position.



Place the trailer bar on 2 stands either directly under the king pin, or directly under the tow eyelet on the (semi-) trailer. Level the trailer bar using the bubble (fine tuning is done using the measuring system later during the process). Turn the laser on and point it approximately at the centre of the king pin or the tow eyelet.



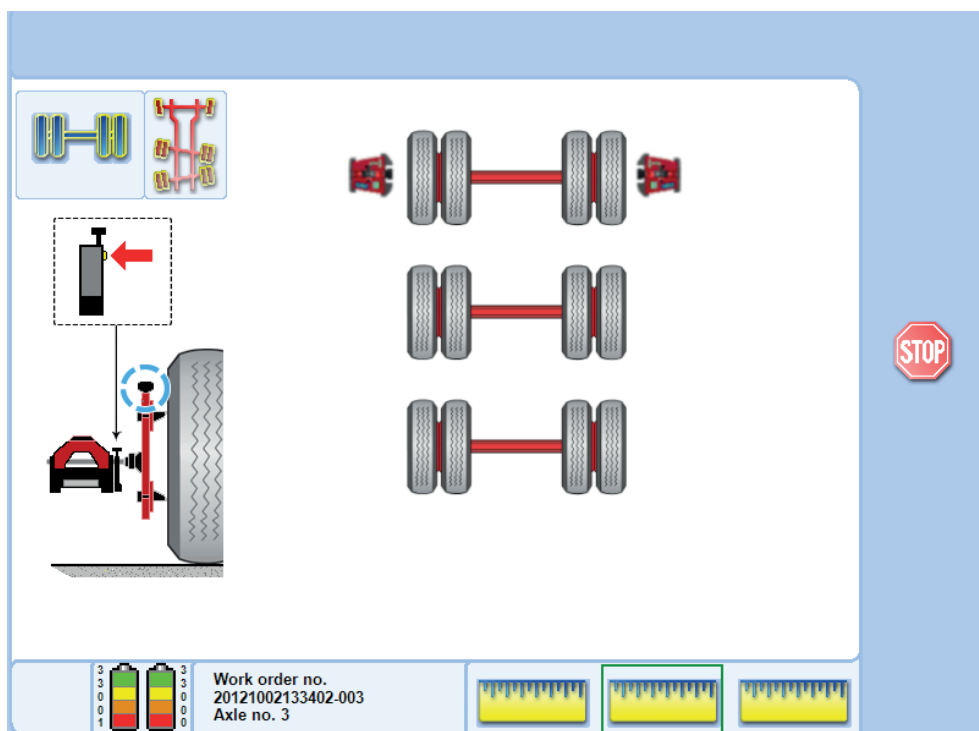
NOTE! LOCK THE DOLLY ON A FULL TRAILER USING THE DOLLY LOCK BY PLACING IT BETWEEN THE DOLLY AND TRAILER CHASSIS. TIGHTEN SO THAT THE DOLLY CANNOT MOVE IN RELATION TO THE CHASSIS.

Measuring first time

Place the both measuring heads on the trailer bar then press OK to start leveling the trailer bar. Adjust the trailer bar in level, indicated with green digits, using the instructions on the display. When ready move the trailer bar sideways so that the laser points exactly in the centre of the king pin or tow eyelet, when ready press OK or push the button on one of the measuring heads.

Continue the flow by placing measuring head on a wheel adapter on the first axle and press the button on the measuring head to take the initial measurements of toe, camber and position of that wheel. When the software has registered the data the user interface moves the measuring head to the next axle, which can be measured the same way.

Up to 2 operators may measure at the same time using two measuring heads, one each wheel. Note that only one measuring head at a time can measure and collect data. The second measuring head is only activated once data sent from the first measuring head has been acknowledged by the PC. There is no specified measuring flow other than that all wheels must be measured starting with the rear axle and progressing forward.



When all wheels have been measured the operator is instructed to roll the vehicle.

Rotate the wheels 180°

Rotate all wheels by lifting each axle and spinning the wheels 180° so that the knob of each wheel clamp points downwards before lowering the axle down smoothly.



Perform a Second Measurement

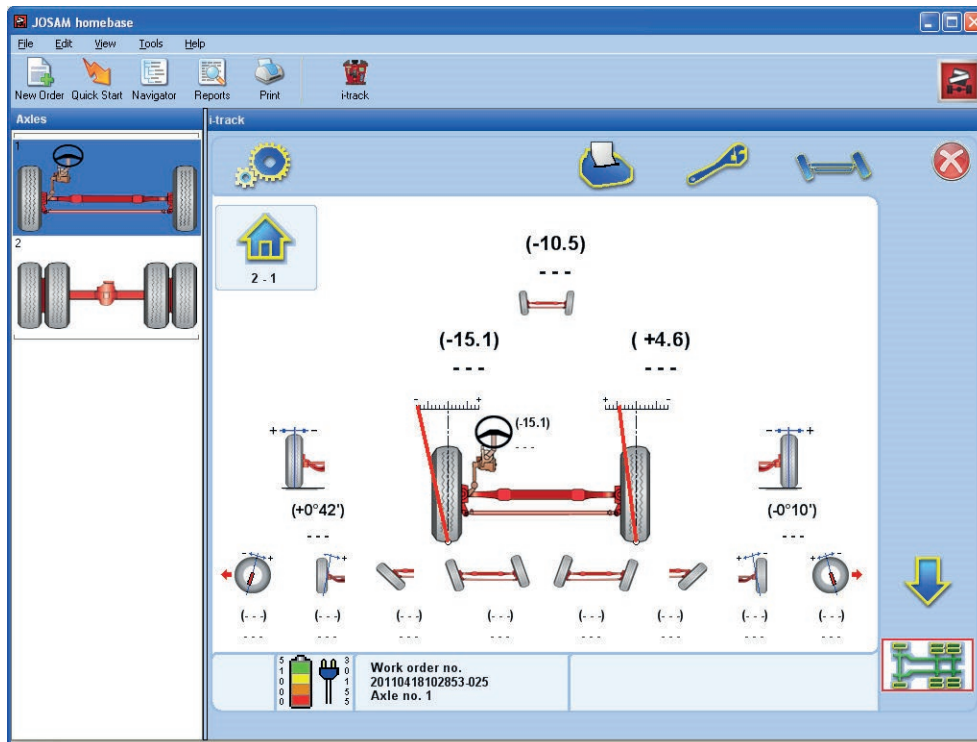
Perform a second measurement of Toe, Camber and wheel positions, but now starting from the rear.

Check that the trailer bar is centred under the king pin or tow eyelet.

A screenshot of a vehicle measurement software interface. The interface is divided into several sections. On the left, there are icons for a wheel and a suspension component. Below these is a diagram of a wheel being measured by a sensor. In the center, there are three diagrams of axles with wheels, representing different measurement points. On the right, there is a 3D model of a red trailer bar with a king pin and a red 'STOP' sign. At the bottom, there are three yellow measurement graphs and a text box containing work order and axle information.

Work order no.
20121002133402-003
Axle no. 3

The software will display the Steering box position, Twinsteer alignment and the results for Toe, Camber, Out of Square, and Parallelism measurements.



NOTE! REMOVE THE DOLLY LOCK WHEN READY!

Main Icons



Main

Main button will end the measurement and return to main menu.



Stop measuring

Interrupts the current step. Visible only when measurements are performed. A stopped measurement can be re-established with the OK-button, or terminated by using the main-button. The measurement can be restarted from earlier or later steps by using the left- or right-button.



OK

The OK is used to step through the stages displayed in the results window. If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

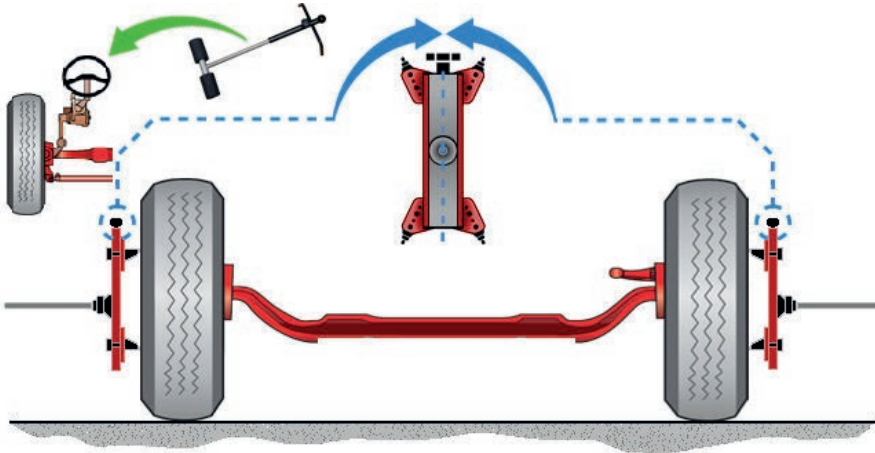
Blank Page

Measurement of a combined Vehicle

Conditions



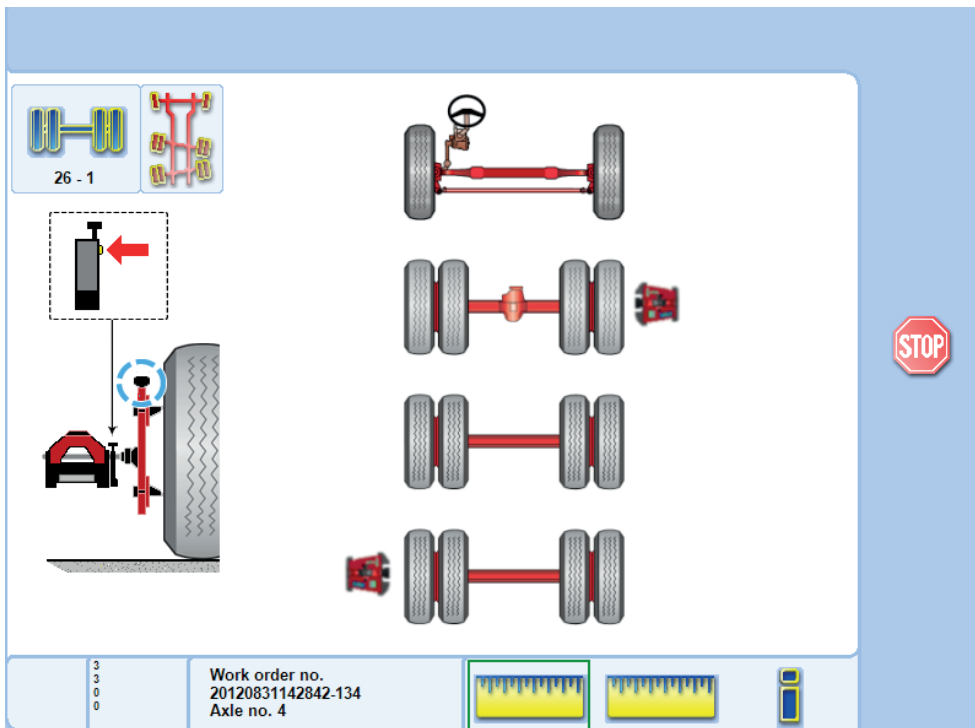
All axles are measured simultaneously before adjustment. Place a wheel adapter with the knob pointing upwards on each wheel of both vehicles and lock the steering wheel in the straight ahead position.



Measuring first time

Place the measuring head on the wheel clamp on the rear axle. Press the button on the measuring head to start the wheel position measurements for Toe, and Camber and wheel position for that particular wheel. When the software has registered the data the user interface moves the measuring head to the axle in front, which can be measured the same way.

Up to 2 operators may measure at the same time using two measuring heads, one each wheel. Note that only one measuring head at a time can measure and collect data. The second measuring head is only activated once data sent from the first measuring head has been acknowledged by the PC. There is no specified measuring flow other than that all wheels must be measured starting with the rear axle and progressing forward.

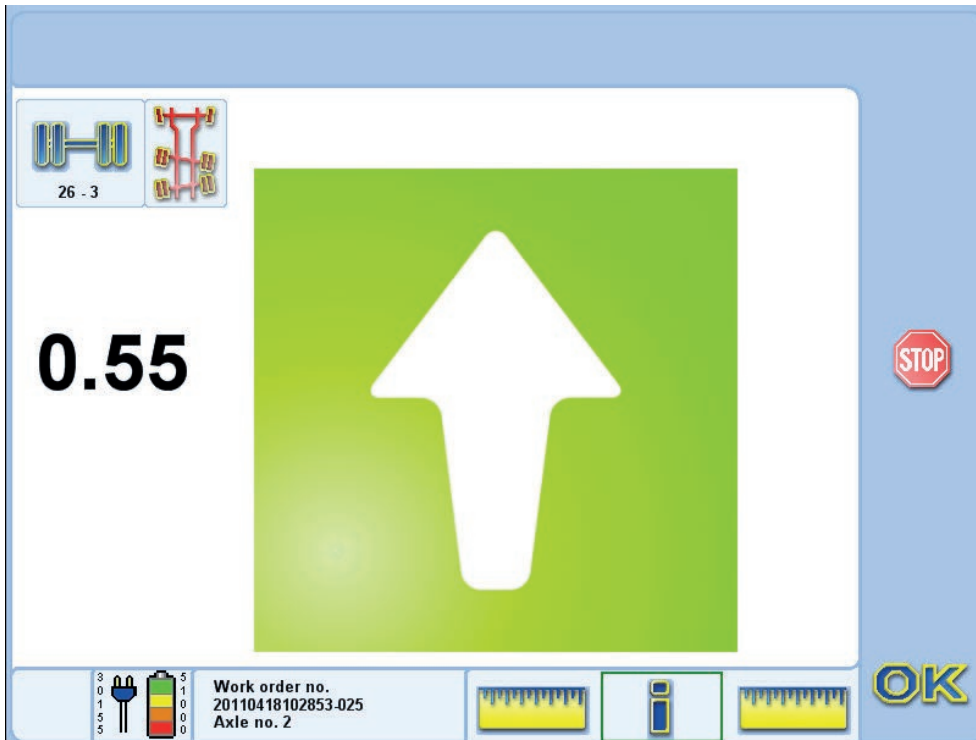


When all wheels have been measured the operator is instructed to roll all wheels 180°. Rotate the wheels 180°



During rolling the screen will display the distance needed to roll. The software always displays the direction of which the vehicle is physically moving.

NOTE: FORWARD ROLLING IS RECOMMENDED. BACKWARD ROLLING IS ACCEPTED.



When the vehicles has reached the position the software shows a stop sign:

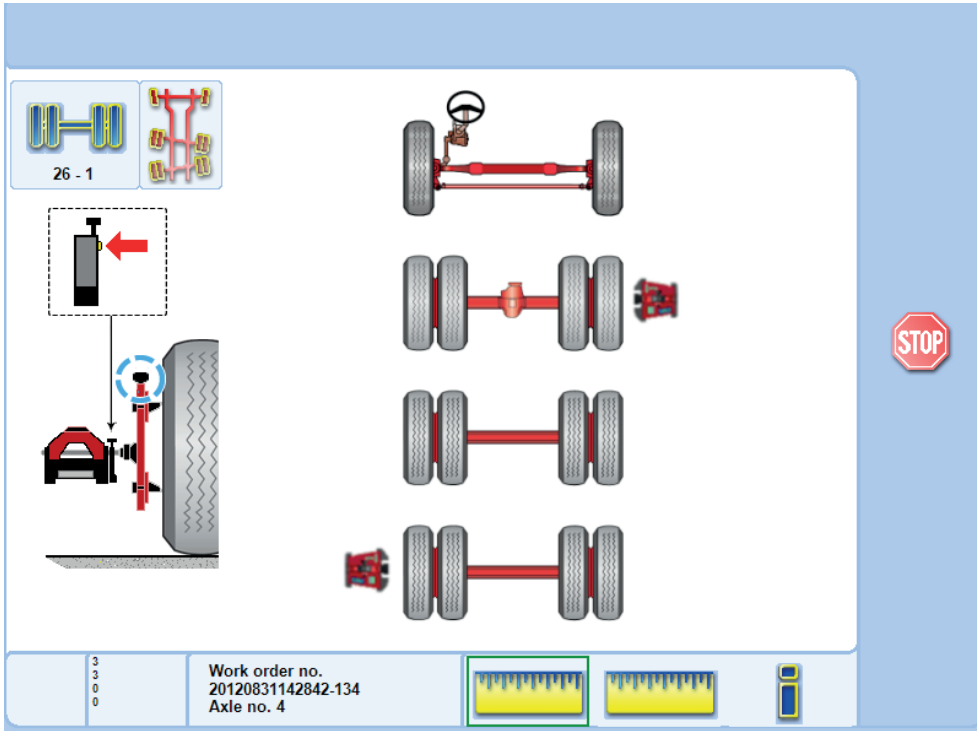


NOTE: FOR VEHICLES WITH VARYING TIRE SIZES, THE ROLLING PROCESS MUST BE PERFORMED IN TWO STAGES.

Choose the axle wheel diameter of which occurs most on the vehicle. Raise the axles and rotate the wheels 180°. After the first rolling is complete, raise the axles with the second diameter and rotate 180°

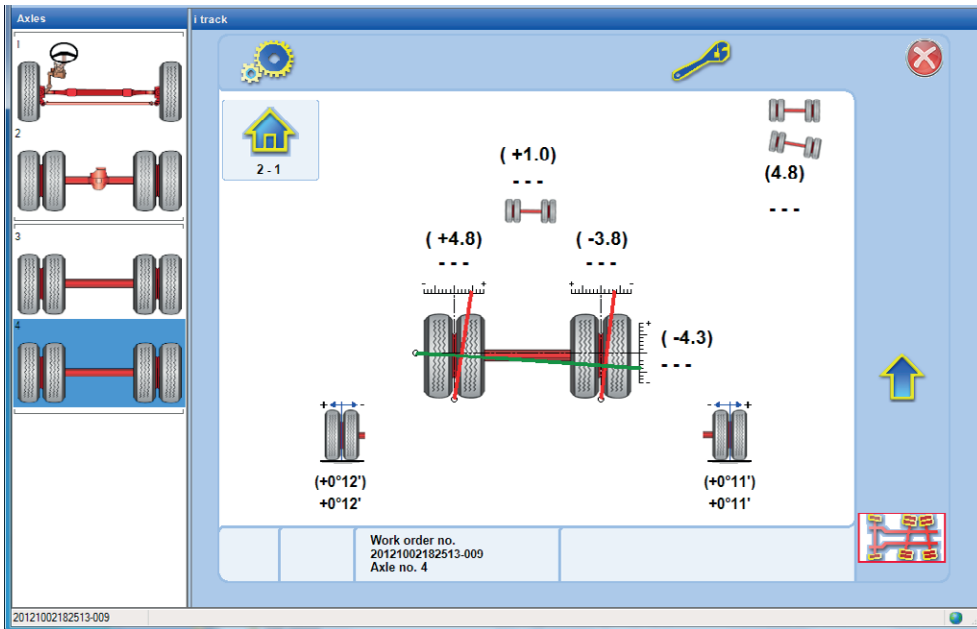
Perform a second measurement

Perform a second measurement of the Toe, Camber and wheel position starting with the front axle.



Result window

After the rolling measurement the software has measured Toe, Camber, Out of Square, Parallelism, Steering box position and Twinsteer alignment.



Menu Icons

**Main**

Main button will end the measurement and return to main menu.

**Stop measuring**

Interrupts the current step. Visible only when measurements are performed.

A stopped measurement can be re-established with the OK-button, or terminated by using the main-button. The measurement can be restarted from earlier or later steps by using the left- or right-button.

**OK**

The OK is used to step through the stages displayed in the results window.

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

Blank Page

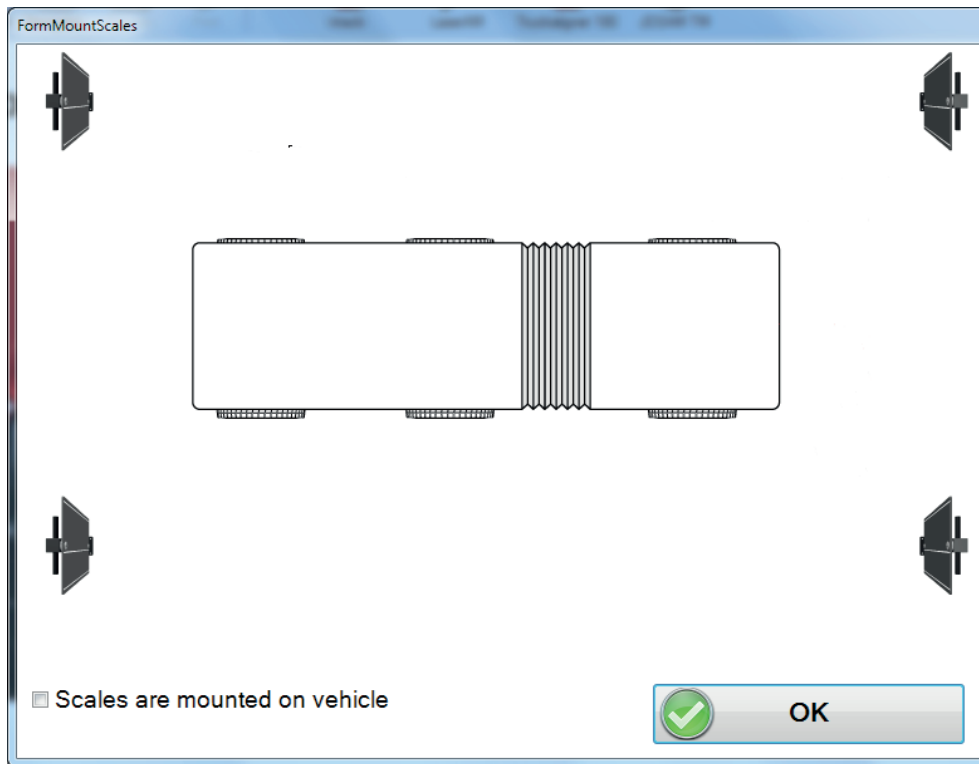
Measurement of an Articulated Bus

Conditions



Select scale setup for the measurement, press **OK** when ready.

With the i-track measuring method all axles are measured simultaneously before adjustment. Place a wheel clamp on each wheel of the vehicle with the knob pointing upwards and lock the steering wheel in straight ahead position.



Measuring for the first time

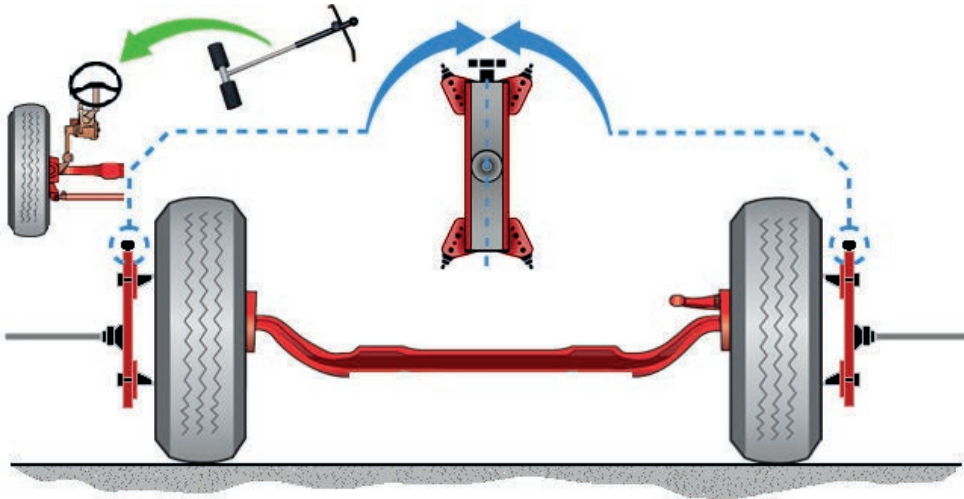
Assemble the measuring head on a stand to the left of the vehicle at the rear of the joint.

Press **OK** or on the button on the measuring head.

Move the measuring head with stand to the front of the joint.

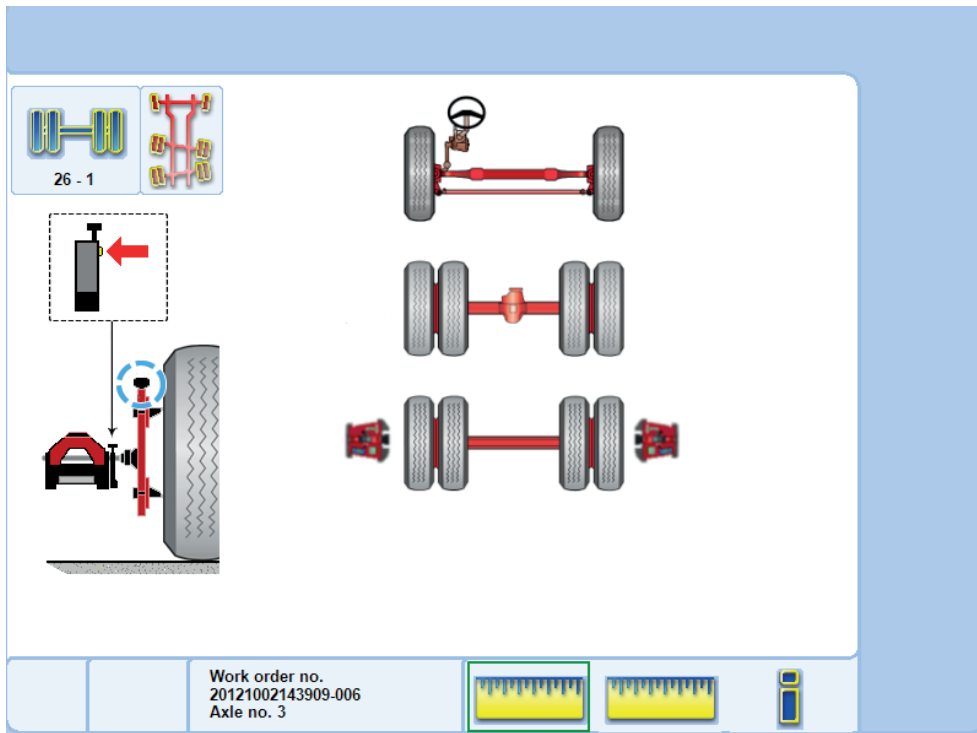
Press **OK** or on the button on the measuring head.

The software will now display the distance from the center of the joint to the front scale, press **OK** when ready.



Place the measuring head on the wheel adapter on the wheel on the rear axle. Press the button on the measuring head to start the wheel position measurements for Toe, and Camber and wheel position for that particular wheel. Repeat the process on the wheels on both sides of the axle, one at a time.

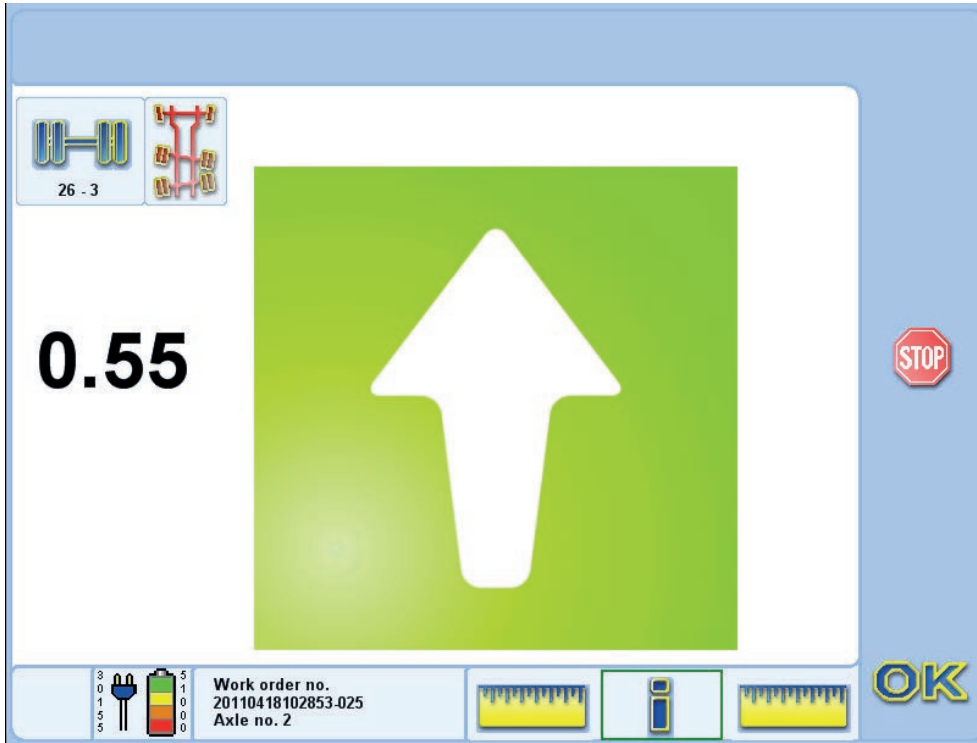
Up to 2 operators may measure at the same time using two measuring heads, one each wheel. Note that only one measuring head at a time can measure and collect data. The second measuring head is only activated once data sent from the first measuring head has been acknowledged by the PC. There is no specified measuring flow other than that all the wheels must be measured starting with the rear and moving forward.



When all wheels have been measured the operator is instructed to roll all wheels 180°. Rotate the wheels 180°.



During rolling the screen will display the distance needed to roll. The software always displays the direction of which the vehicle is physically moving.



NOTE: FORWARD ROLLING IS RECOMMENDED. BACKWARD ROLLING IS ACCEPTED.

When the vehicles has reached the position the software shows a stop sign:

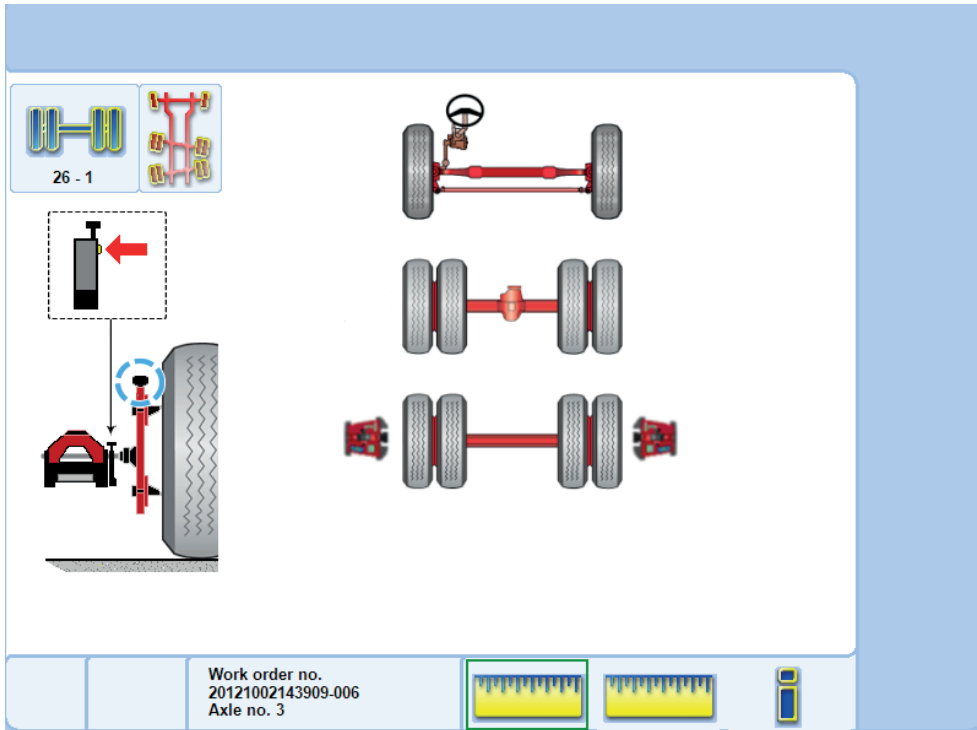


NOTE: FOR VEHICLES WITH VARYING TIRE SIZES, THE ROLLING PROCESS MUST BE PERFORMED IN TWO STAGES.

Choose the axle with the wheel diameter of which occurs most. Raise the axles rotate the wheels 180°. After the first rolling is complete, raise the axles with the second diameter and rotate 180°

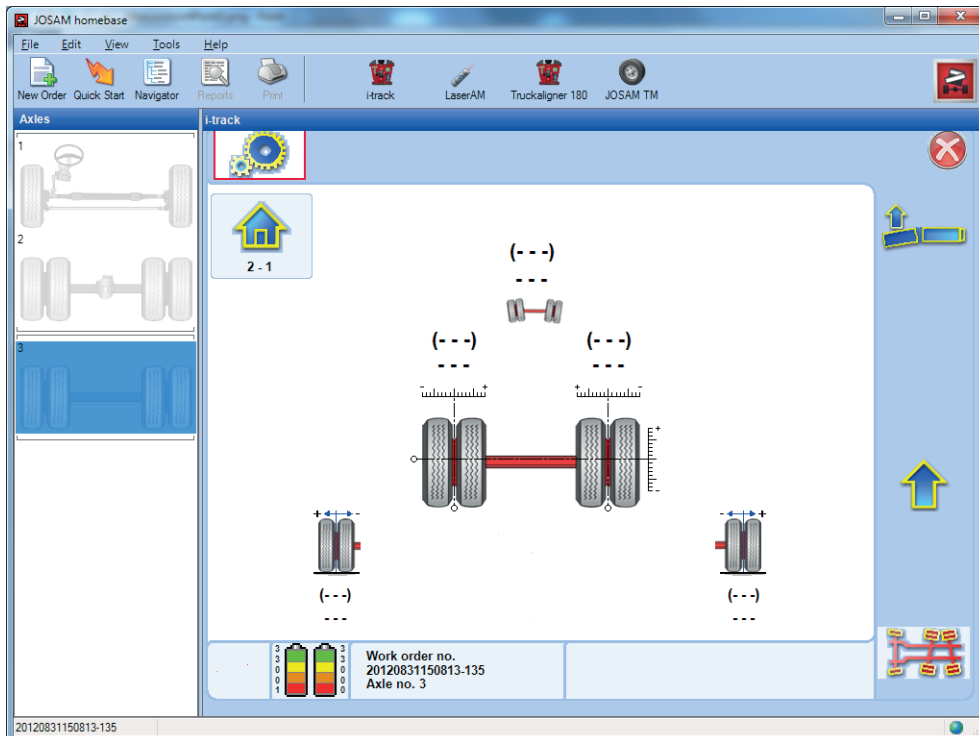
Perform a Second Measurement

After rolling the Toe, Camber, and wheel position, all wheels have to be measured again starting at the front.



Result window

After the rolling measurement the software has measured Toe, Camber, Out of Square, Parallelism, steering box position and Twinsteer alignment.



Menu Icons



Main

Ends the measurement and returns to main menu.



Stop measuring

Interrupts the current step. Visible only when measurements are performed.

A stopped measurement can be re-established with the OK-button, or terminated by using the main-button. The measurement can be restarted from earlier or later steps by using the left- or right-button.



OK

The OK is used to step through the stages displayed in the results window.

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

Blank Page

Adjust Toe and Camber

The Adjust Toe and Camber mode displays live values under adjustment.

Before entering the adjustment mode check all conditions are fulfilled.

The first step (measuring Camber) can be skipped by pressing the arrow button to the right.

Press **OK**.

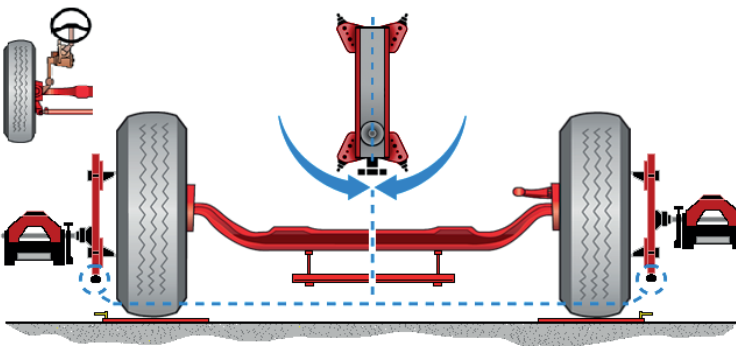
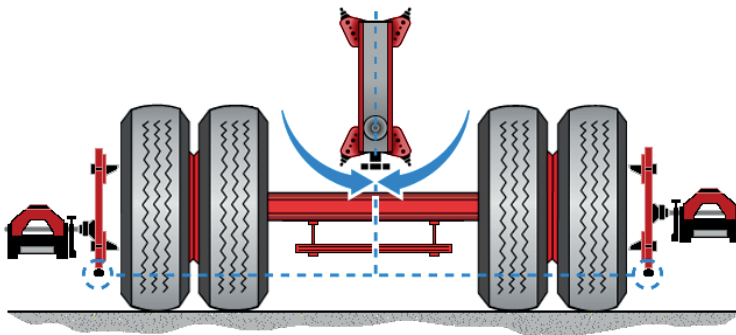
When you have finished adjusting, i-track will automatically continue to measurement after adjustment. Tighten all bolts/nuts and press **OK** to perform this measurement.

The result will be displayed on the screen.

NOTE: WE RECOMMEND THAT THE COMPLETE VEHICLE IS RE-MEASURED AFTER ADJUSTMENT!

Conditions

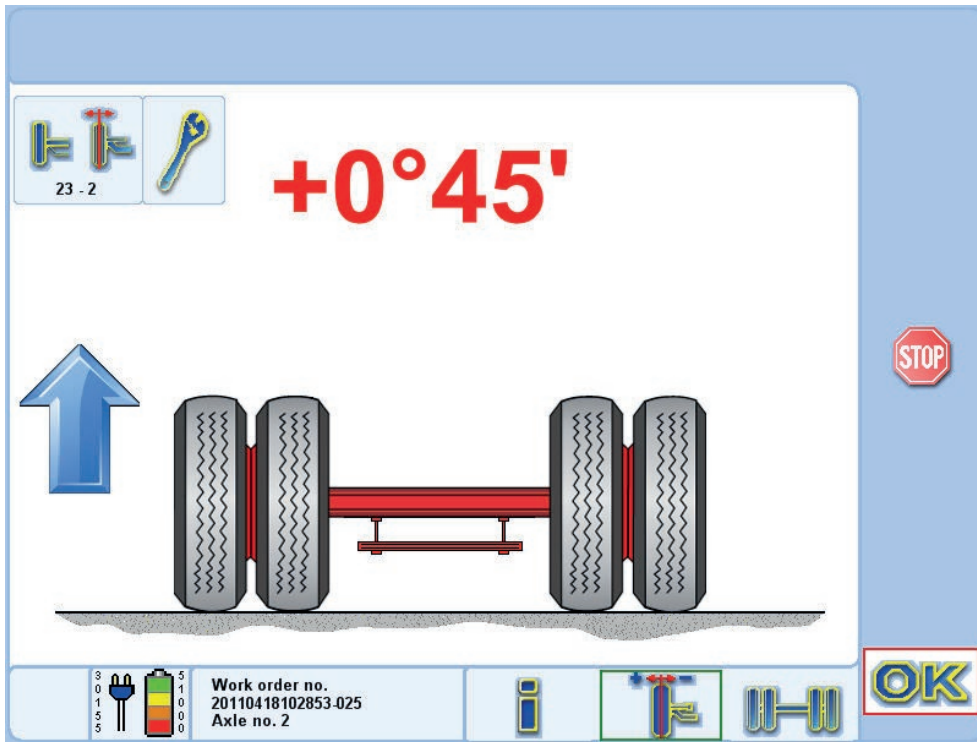
To enter the adjustment mode press



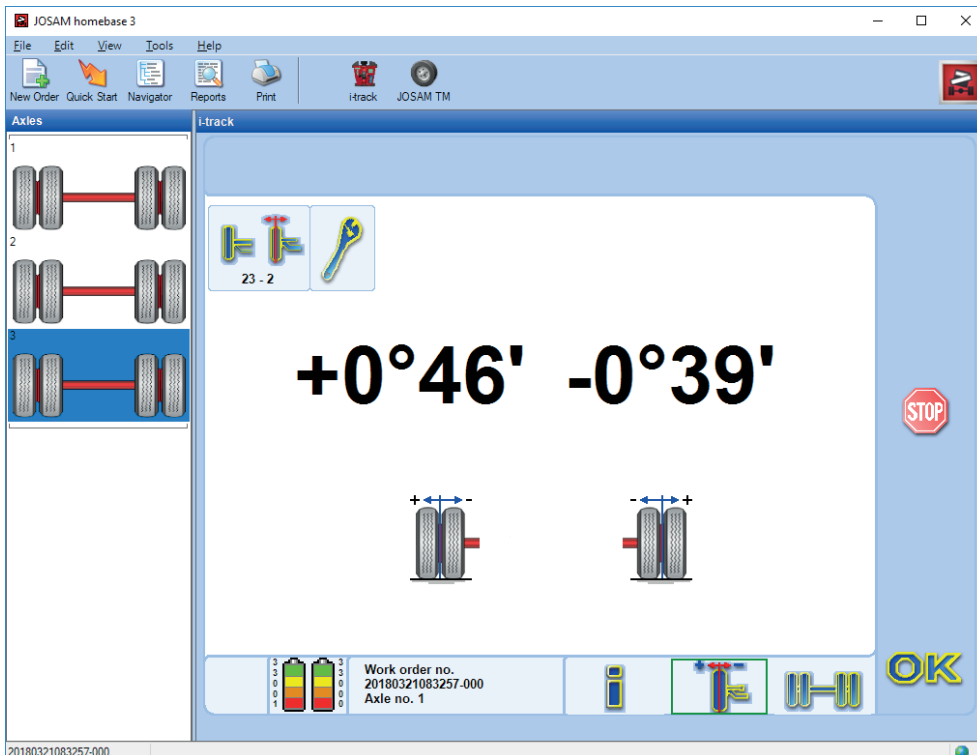
- A. Check that the wheel adapter knobs are pointing downwards.
- B. Check that the axle is standing on the floor and **NOT** jacked up.
- C. Check that the axle is leveled.
- D. Assemble the measuring heads onto the wheel adapters.
- E. Press **OK** when ready.

Adjust Camber

Shim the axle on driven rigid axles in level.



1. Press **OK** when the axle is leveled, no adjustment possible.
2. Adjust the camber on all other axles.
3. The results for left and right side camber angles are shown continuously while adjusting.



4. When ready press

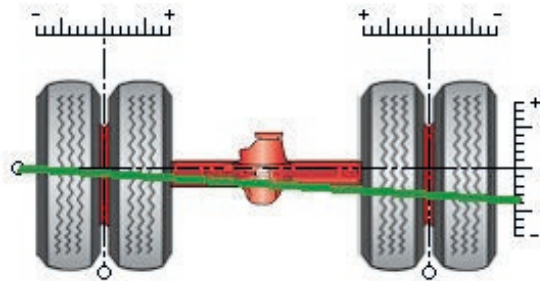


Adjust Toe


-10.6



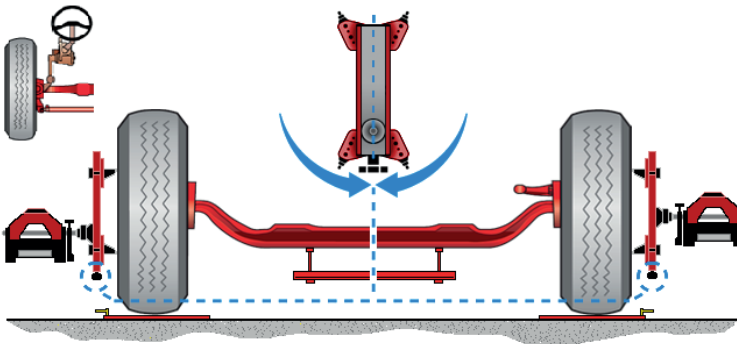
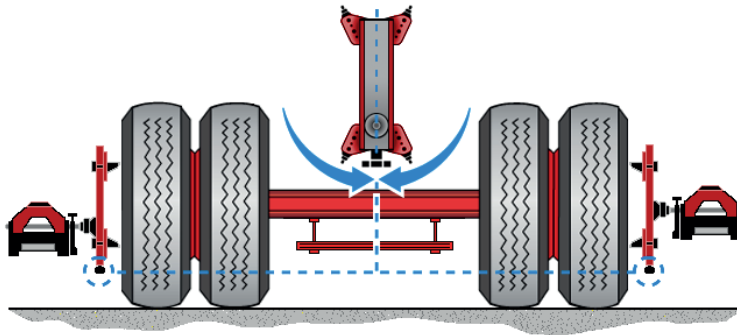
-1.4 -9.3




-3.9

1. The values for left and right toe and total toe are shown continuously while adjusting.
2. On a non-steering axle out of square and axle parallelism are shown as well.
3. When ready press 

Conditions



- A. Check that the wheel adapter knobs are pointing **downwards**.
- B. Check that the axle is standing on the floor and **NOT** jacked up.
- C. Check that the axle is leveled.
- D. Assemble the measuring heads onto the wheel adapters.
- E. Press 

Menu Icons



Main

Main button will end the measurement and return to main menu.



Stop measuring

Interrupts the current step. Visible only when measurements are performed. A stopped measurement can be re-established with the OK-button, or terminated by using the main-button. The measurement can be restarted from earlier or later steps by using the left- or right-button.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.



OK

The OK is used to step through the stages displayed in the results window. If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

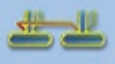
Measure Twinsteer Axles

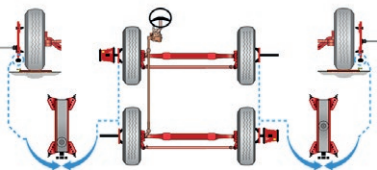
The Twinsteer axle menu is used to measure the parallelism of two steering axles. There are 2 methods implemented in the software, one including measurement of play and one without play measurement. We recommend using the measurement including play since this will result in the best possible results for aligning these axles since there can be quite some play in the linkage which the other method neglects.











Measuring steps for Twinsteer measurement with play.

1. The wheels should be placed on the no-friction plates on the floor.
2. Assemble a measuring head to the wheel on the left on the first axle.
3. Assemble a measuring head to the wheel on the right on the second axle.

NOTE: MAKE SURE THAT THE KNOBS ON THE WHEEL ADAPTER WITH MEASURING HEAD ARE POINTING DOWNWARDS.

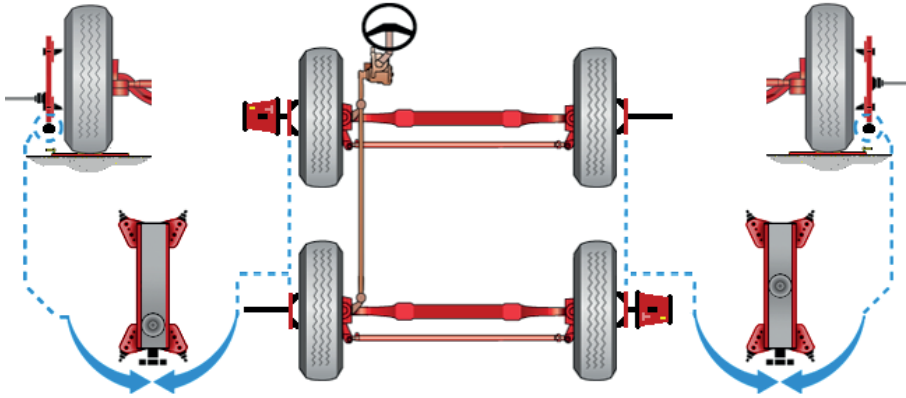
4. Press  Twinsteer.
5. Check if all conditions are fulfilled



6. Press .
7. Turn the wheels to the left to at least -100 mm/m or until the figures turn green .
8. Wait until i-track continues by itself or press .
9. Turn to the right to at least -30 mm/m or until the figures get green .
10. Wait until i-track continues by itself or press .
11. Put the wheels in straight forward position, 0 ± 5 mm/m .
12. Wait until i-track continues by itself or press .
13. Turn the wheels to the right to at least 100 mm/m or until the figures get green .
14. Wait until i-track continues by itself or press .
15. Put the wheels in straight forward position, 0 ± 5 mm/m .
16. The results will be displayed on the screen.

Conditions

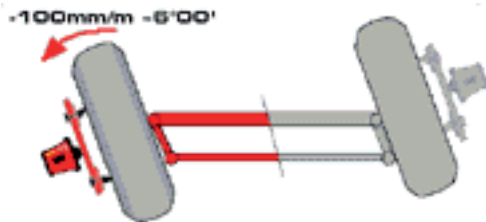
- A. Make sure that the wheel adapter knobs are pointing **downwards**.
- B. Steering axle standing on the floor using four non-friction plates **NOT** jacked up.
- C. Assemble a measuring head at the left side on the first axle and the right side of the second axle.



D. Press 

Turn the wheels outwards to the left -100 mm/m

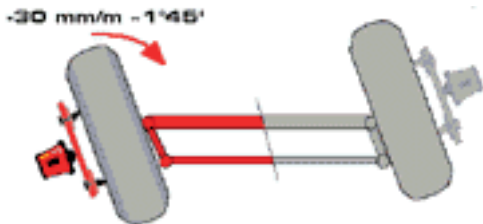
1. Turn wheels at least -100 mm/m to the left.
2. When you reach this angle the program will proceed with next step.



NOTE: IF YOU PRESS BEFORE YOU REACH -100 MM/M IT WILL GREATLY AFFECT THE MEASUREMENT RESULTS.

Turn the wheels inwards to -30 mm/m

1. Turn wheels back to -30 mm/m.
2. When you reach this angle the program will proceed with next step.

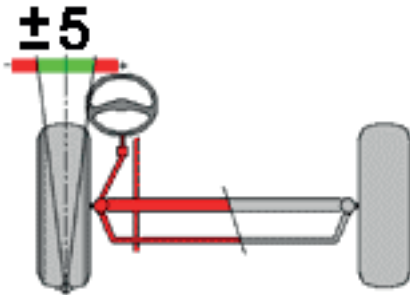


NOTE: IF YOU PRESS  BEFORE YOU REACH -30 MM/M IT WILL AFFECT THE MEASUREMENT RESULTS.

Turn the wheels straight

1. Turn wheels back towards 0 (zero) ± 5 mm/m.
When you get a stable value it turns green and the program continues with next step.

NOTE: DO NOT TURN THE STEERING WHEEL TO THE LEFT OR BACK AND FORTH THIS WILL AFFECT THE MEASUREMENT RESULTS.



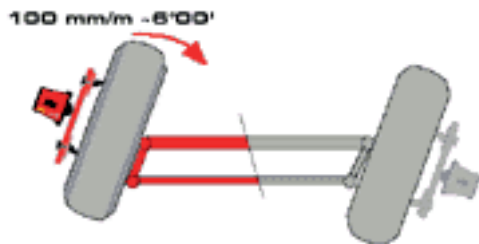
Turn outwards to the right 100 mm/m

1. Turn wheels at least 100 mm/m to the right.
When you reach this angle the program will proceed with next step.

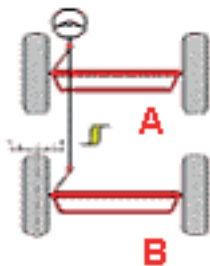
NOTE: IF YOU PRESS BEFORE YOU REACH 100 MM/M IT WILL GREATLY AFFECT THE MEASUREMENT RESULTS.


Result window

When result window appears the results are saved.



- A. Play in the steering linkage.
- B. Twin Steer parallelism.




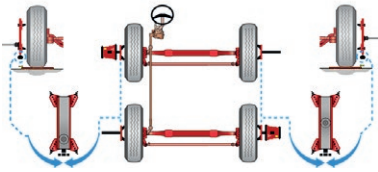
Press  to get back to steering axle menu.





Measuring steps for Twinsteer Measurement without play.

1. The wheels should be placed on the non-friction plates on the floor.
2. Assemble a measuring head to the wheel on the left on the first axle.
3. Assemble a measuring head to the wheel on the right on the second axle.

NOTE: MAKE SURE THAT THE KNOBS ON THE WHEEL ADAPTER WITH MEASURING HEAD ARE POINTING DOWNWARDS.

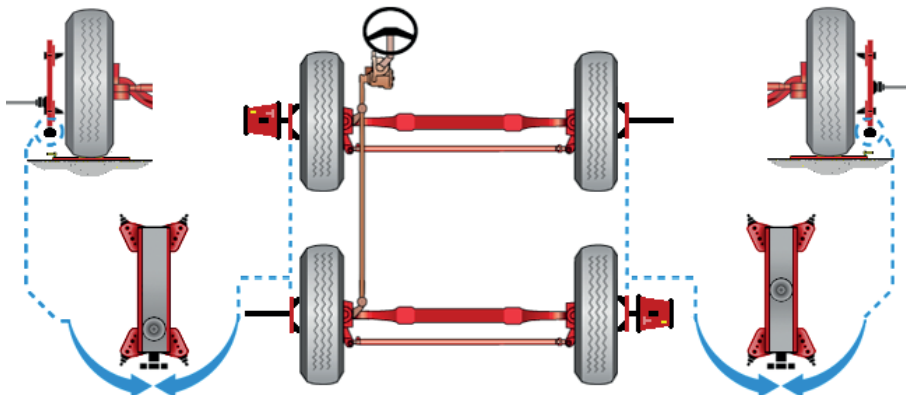
4. Press  Twinsteer.
5. Check if all conditions are fulfilled



6. Press .
7. Put the wheels in straight forward position, 0 ± 5 mm/m .
8. Wait until i-track continues by itself or press .
9. The results will be shown on the screen. It is now possible to adjust Twinsteer  in the adjust menu.

Conditions

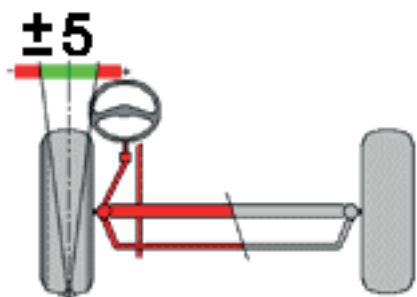
- A. Make sure that the wheel adapter knobs are pointing **downwards**.
- B. Make sure that the steering axle standing on the floor is positioned on four non-friction plates and is **NOT** jacked up.
- C. Assemble a measuring head on the left side of the first axle and the right side of the second axle.



- D. Press .

Turn the wheels straight

1. Turn wheels back towards 0 (zero) ± 5 mm/m. When a steady value is reached the reading will turn green and the software will proceed to the next step.



NOTE: DO NOT TURN THE STEERING WHEEL TO THE LEFT OR BACK AND FORTH THIS WILL AFFECT THE MEASUREMENT RESULTS. PRESS TO GET BACK TO STEERING WHEEL MENU.

2. Press OK .

Menu Icons



Main

Ends the measurement and returns to main menu.



Stop measuring

Interrupts the current step. Visible only when measurements are performed.
The measurement can be re-established with the OK-button, or terminated by using the main-button.
The measurement can be restarted by stepping back using the left-button.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.




OK

The OK is used to step through the stages displayed in the results window.
If an error occurs during a step, an error dialog is displayed. Pressing the OK.
Pressing the OK button in the last step will bring you back to steering axle menu.

Blank Page

Measure Caster, KPI, TOOT and max. turn [i-track]

This mode is used to measure the turn angles on a steering axle. Measuring max. turn angles uses the camber values by default.

NOTE: THE PROGRAM CONTINUES IN THE PROCESS WHEN 3 IDENTICAL VALUES HAVE BEEN RECEIVED, THIS MEANS A SLIGHT DELAY IN THE PROCESS. THE OPERATOR CAN OVERRIDE THIS DELAY BY PRESSING , TO CONTINUE.

NOTE: BRAKE THE WHEELS OF THE AXLE TO BE MEASURED.

Measuring steps for all angles

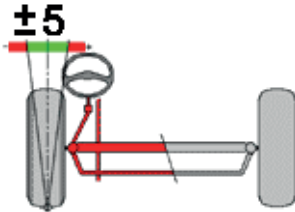
1. Press .


2. Check if all conditions are fulfilled.





3. Press .


4. Put the steered wheel in straight forward position.





5. Press  or wait until i-track continues by itself.


6. Turn 20°  to the left or until the figures turn green.


7. Press  or wait until i-track continues by itself.


8. Turn to the left maximum turn 

9. Press  or turn left when the dots are green.

10. Turn 20° to the right or until the figures turn green 

11. Press  or wait until i-track continues by itself.

12. Turn to the right maximum turn 

13. Press or turn left when the dots are green 

Conditions

NOTE: BRAKE THE WHEELS.

- A. Check that the steering axle is jacked up.
- B. Check that the steering axle is leveled.
- C. Assemble the measuring heads on the wheel adapters.

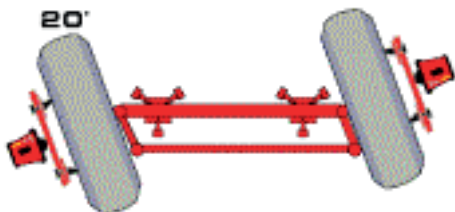


Wheels straight forward

The measured toe value for the steering wheel side is displayed in green or red depending on if the value is inside or outside the limit of +/- 10 mm/m.

20 degrees left turn

Turn the wheels 20 degrees left or until the figures turn green.

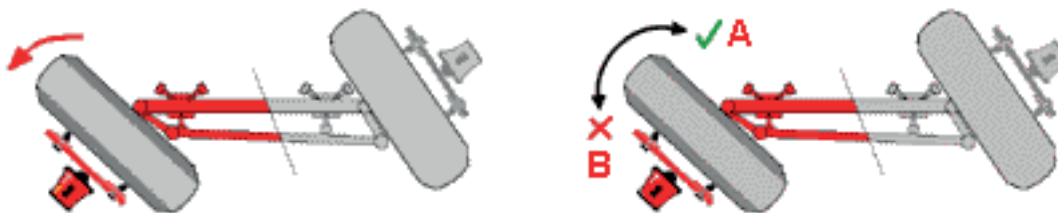


Wheels max left

Turn the wheels fully to the left.

The program automatically continues to the next sub-step after a stable reading.

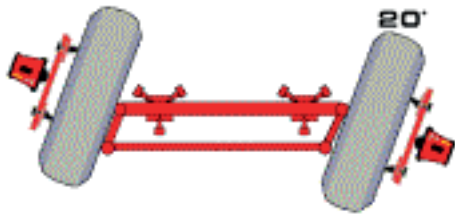
The presented value shows the current max. wheel turn.



- A. Turn the wheels straight forward to accept the value displayed. When the system detects that you are turning to the right it will automatically jump to the next step.
- B. If you have not turned max. to the left, continue to do so. A new higher reading is accepted as the new max. turn value.

20 degrees right turn

Turn the wheels 20 degrees right or until the figure turns green.

**Wheels max right**

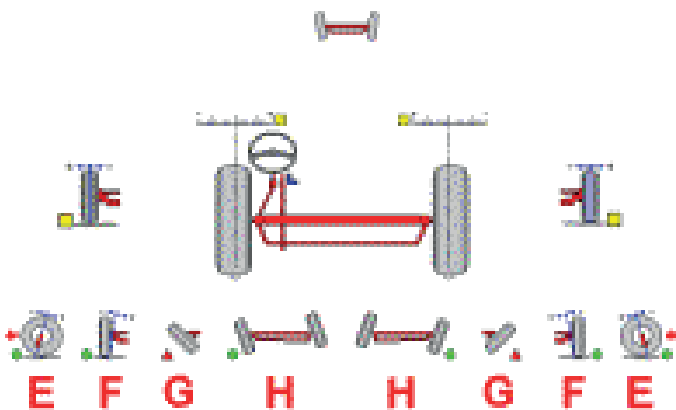
Turn the wheels fully to the right.

The program automatically continues to the next sub-step after a stable reading.

The presented value shows the current max. wheel turn.



- A. Turn the wheel max. to the left if you accept the shown value. When the system detects that you are turning to the left it will automatically jump to the next step.
- B. If you have not turned max. to the right, you can continue to do so. A new higher reading is accepted as the new max. turn value.

Result Window

- E. Caster.
- F. KPI.
- G. Max Turn.
- H. TOOT (Toe Out on Turns).

Main Icons



Main

Ends the measurement and return to main menu.



Stop measuring

Interrupts the current step. Visible only when measurements are being performed.

The measurement can be re-established with the OK-button, or terminated by using the main-button.

Stepping back using the left-button restarts the measurements.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.



OK

The OK is used to step through the stages displayed in the results window.

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

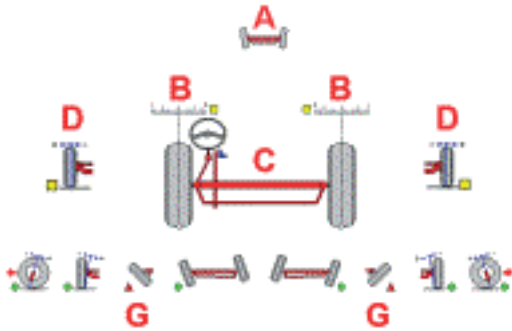
When an error dialog is displayed, the execution of the current step is repeated.

Pressing the OK button in the last step will bring you back to steering axle menu.




Adjust Steering Axle

The adjust steering axle menu displays all the adjustment options for steering axles.
To adjust an angle, press the button with the symbol for the angel to be adjusted.

Result window



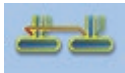
- A. Total toe
- B. Toe
- C. Steering box
- D. Camber
- G. Max. turn

-  Max. turn
-  Steering box
-  Toe and camber

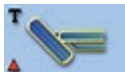
Main Icons



Main
Enter main menu.



Twinsteer
Twinsteer is only displayed when two steering axles are measured



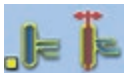
Adjust max. turn (toe)
Measure max. turn with toe while adjusting.



Adjust Steering box
Measure steering box position while adjusting.



Adjust max. turn (camber)
Measure max. turn with camber while adjusting. Before the adjustment can take action you have to manage caster, KPI, TOOT and max. turn measurement to get data that is needed for the adjustment.



Adjust toe and camber
Measure toe and camber while adjusting.



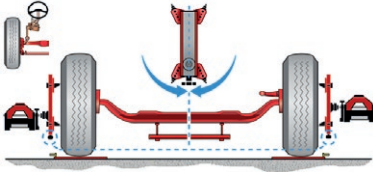
OK
OK button brings you back to the previous menu.



Adjust Steering Box

The adjust steering box position menu is used to continuously measure the steering box while being adjusted.

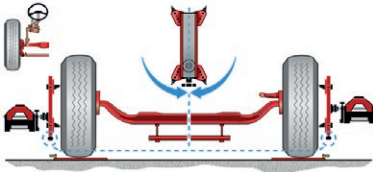
Measuring steps:

1. Check that all conditions are fulfilled.

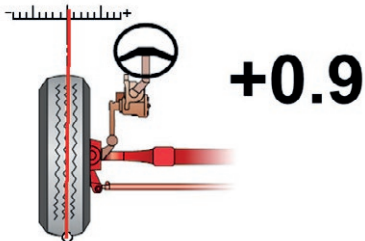


2. Put the marks on the steering box housing and steering box input shaft together, push the button .
3. Truckaligner is now continuously measuring the position of the steered wheel while adjusting.
4. When finished adjusting, press  to store the values.

Conditions



- A. Make sure that the wheel adapter knobs are pointing downwards.
- B. Make sure that the steering axle is positioned on the floor and **NOT** jacked up.
- C. Make sure that the axle is leveled.
- D. Assemble the measuring heads on the wheel adapters.
- E. Turn the steering wheel straight forward position.
- F. The steering box result is displayed continuously while being adjusted.



- G. Press .

Menu Icons



Steering axle menu

Choose measuring mode in the steering axle menu.



Stop measuring

Interrupts the current step. Visible only when measurements are performed.

The measurement can be re-established with the OK-button, or terminated by using the main-button.

The measurement can be restarted by stepping back using the left-button.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.



OK

The OK is used to step through the stages displayed in the results window.

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

Pressing OK in the last step brings you back to adjust steering menu

Adjust Twinsteer Axles

The Adjust Twinsteer Axle mode displays the toe values simultaneously during the adjustment of the twin steered axles. There are two methods of measuring.

With play


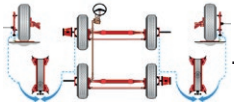






Tension the steering before adjustment. Rotate the wheels 100mm/m to the left or right.

Without play

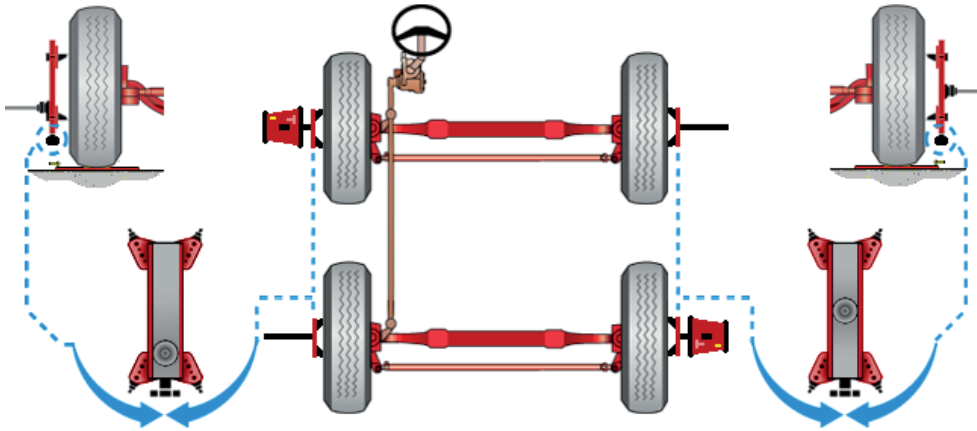
Adjustment can be made without turning the wheels.

NOTE: IF THE ADJUSTMENT IS PERFORMED IN THE WRONG DIRECTION, TENSION WILL BE RELEASED. TENSE THE LINKAGE AGAIN BY REPEATING THE MOVEMENT IN THE STEPS 1 TO 4. ADJUST UNTIL THE FRONT WHEEL IS BACK IN THE STRAIGHT AHEAD POSITION.

Measuring steps:

1. Position the vehicle so that the wheels are positioned on the four non friction plates.
2. Assemble a measuring head on the left wheel of the first axle, and another measuring head on the right wheel of the second axle.
3. Press .
4. Make sure that all conditions are fulfilled .
5. Press .
6. Turn wheels at least 100 mm/m to the left or to the right depending on the parallelism result from the twin steer measurement. Please make sure to turn to the correct direction as displayed on the screen.
7. When the turning values have been reached, the program will proceed with the next step by itself or press .
8. Turn the wheels to the straight forward position, 0 ± 5 mm/m .
9. Wait until Truckaligner continues automatically or press .
10. Adjusting mode has now been entered, and Truckaligner is continuously measuring. Adjust until the two upper values are equal or until the under value is zero (or green). The parallelism between the two steered axles is now within 5 mm/m.
11. Wait until Truckaligner continues by itself or press .
12. Put the wheels in straight forward position, 0 ± 5 mm/m .
13. The results will be displayed on the screen. It is now possible to adjust Twin Steer in Adjust Mode .
14. After performing the adjustment, press . Tighten all bolts/nuts.
15. Measurement can now be continued.

Conditions



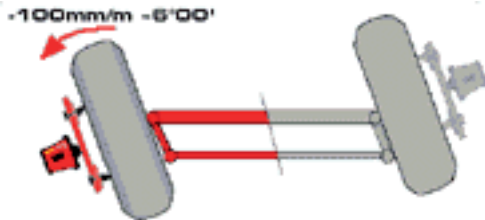
- Make sure that the wheel adapter knobs are pointing **downwards**.
- Make sure that the steering axle is positioned on the floor on four non-friction plates and **NOT** jacked up.
- Make sure that the axle is in level.
- Make sure that the a measuring head is assembled on the left side of the first axle, and on the right side of the second axle.

Press 

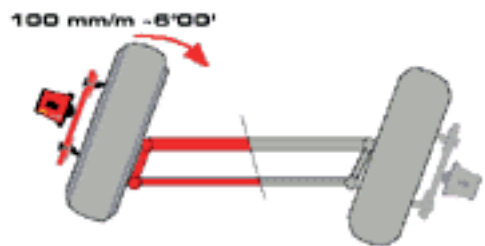
Turn only when the method includes play measurement.

Turn wheels to the left or right depending on the parallelism result from the twin steer measurement.

Please take care to turn the right direction as pointed on the screen.



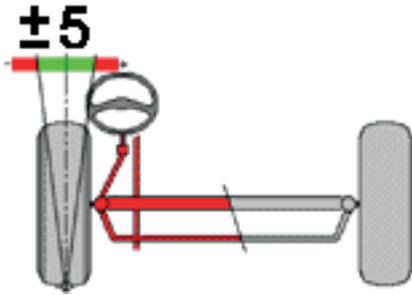
OR



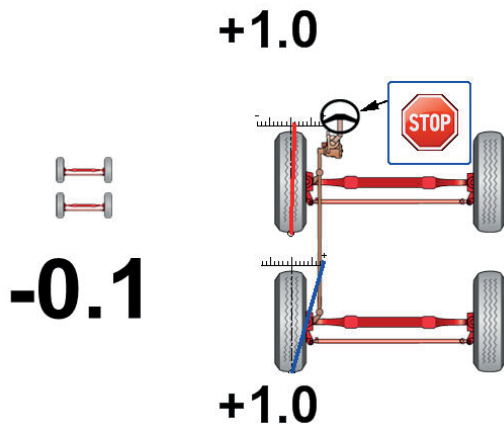
When the turning values are reached the program will proceed with the next step.

Straight

Turn wheels back to straight-ahead- position.



Adjust



Measurement is being performed simultaneously. Adjust the steering linkage as close to 0 as possible.

Click on



Menu icons



Steering axle menu

Returns to the steering axle menu.



Stop measuring

Interrupts the current step. Visible only when measurements are being performed.

The measurement can be re-established with the OK-button, or terminated by using the main-button.

The measurement can be restarted by stepping back using the left-button.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.



OK

Moves between the stages displayed in the Results Window.

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog.

Returns to the Adjust Steering Menu if pressed in the last measuring step.

Adjust Max Turn (Camber)

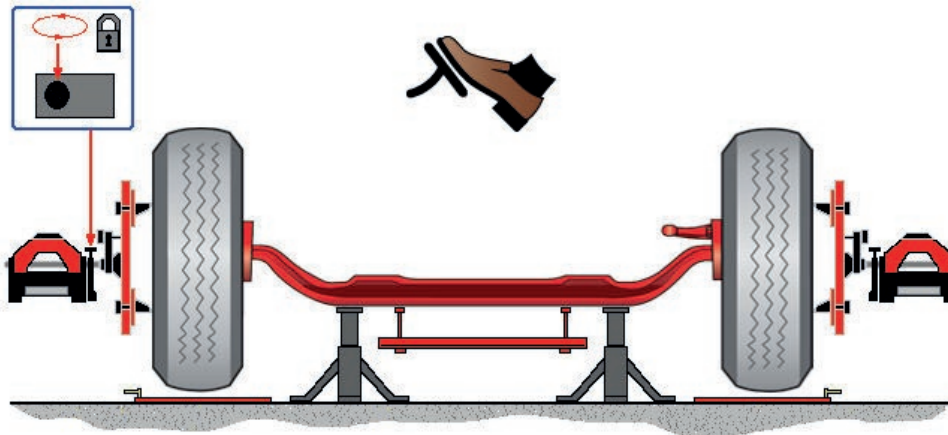
Adjust Max Turn is used to simultaneously adjust the angles on a steering axle whilst measuring. Before adjustment can begin, the operator must perform a Caster, KPI and TOOT measurement to collect data needed for the Adjust Max Turn procedure.

NOTE: AFTER 3 IDENTICAL VALUES HAVE BEEN COLLECTED, A SLIGHT DELAY IN THE PROCESS WILL OCCUR. PRESS  TO OVERRIDE THE DELAY.

The software will proceed automatically to the Adjust Max Turn menu after completing Caster, KPI and TOOT. If other measurements were performed after Caster, KPI and TOOT and Max Turn, the software will proceed to perform a complete measurement of all the wheel angles and Adjust Max Turn. This is to ensure the correct measurement results.

See chapter “Caster, KPI, TOOT and Max Turn” Page 85 for further information.

Conditions

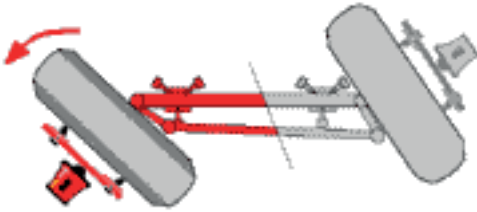


- A. Brake the wheels perform runout.
- B. Make sure that the steering axle is jacked up and **NOT** on the ground.
- C. Make sure that the steering axle is leveled.
- D. Make sure that the measuring heads are assembled to the wheel adapters.

Press  when ready.

Wheels max left

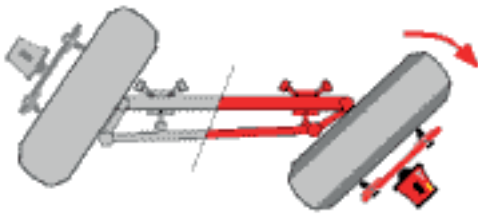
Turn the wheels fully to the left.



Press **OK**.

Wheels max right

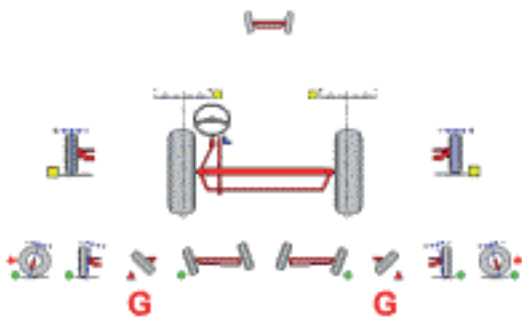
Turn the wheels fully to the right.



When ready press **OK**.

Result window

When result window appears the results are saved.



Menu icons



Steering axle menu

Back to the steering axle menu.



Stop measuring

Interrupts the current step. Visible only when measurements are performed. The measurement can be re-established with the OK-button, or terminated by using the main-button. The measurement can be restarted by stepping back using the left-button.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.



OK

Moves between the stages displayed in the Results Window. If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog. Returns to the Adjust Steering Menu if pressed in the last measuring step.

Blank Page

Calibration

To ensure that the system keeps the accuracy within limits, the measuring heads must be regularly calibrated.

Tools needed:

- Calibrating jig JT350-1
- Frame AM1321.

NOTE: IT IS IMPERATIVE THAT ALL CALIBRATION IS PERFORMED WITH THE HIGHEST PRECISION. MISTAKES IN THE CALIBRATION PROCEDURE WILL RESULT IN INCORRECT MEASURING VALUES.

Menu Icons



Main

Main button brings you to the main menu.



Diagnose

Diagnose is used to diagnose the system behavior.



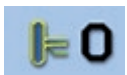
Runout

Perform a runout



Compare

Use the measuring head compare procedure to check if a calibration is needed.



Calibrate toe

To calibrate horizontal (toe) values in the measuring heads.



Calibrate camber

To calibrate vertical (camber) values in the measuring heads.



Calibrate level

Calibrates the electronic level.



Calibrate workspace

Check the calibration of your fixed installed workspace(s).




OK

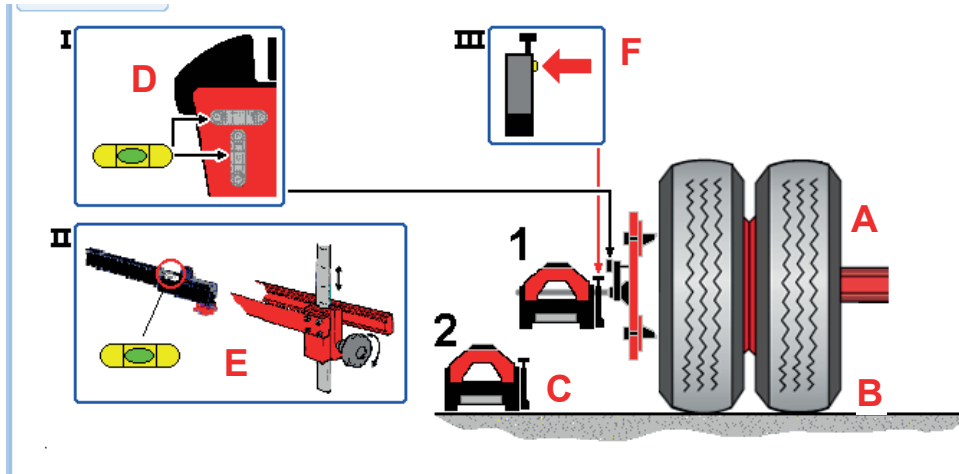
OK button brings you back to the previous menu.

Measuring Unit Compare

Always compare the measuring units before calibration.

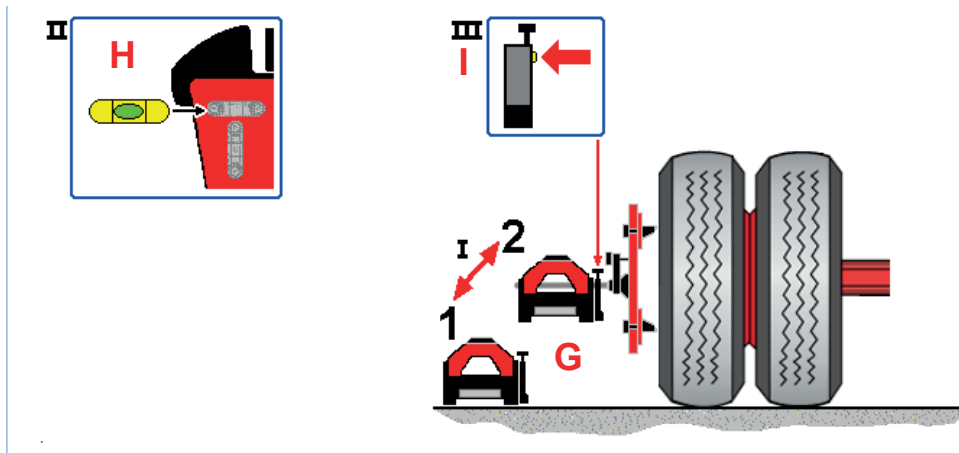
To enter Measuring Unit Compare mode press 

Unit 1



- A. Mount wheel adapter on the left side of a non-steering axle. Distance to scale preferably 3 meters.
- B. Make sure that the axle is **NOT** jacked up.
- C. Assemble the first measuring unit.
- D. Center the bubble on top of the measuring unit.
- E. n/a
- F. Press the measuring button on the measuring unit, to get the values for unit 1.


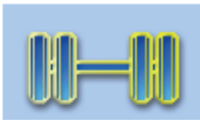


Unit 2



- G. Switch to measuring unit number 2, still working on the same side.
- H. Center the bubble.
- I. Press the measuring button on the measuring unit, to get the values for unit 2.

Results / Exit

The difference between both toe and both camber readings should not exceed 2' ~ 0,6 mm/m.
 If the difference exceeds 2' calibration of the measuring heads is recommended.

| | | | |
|---|---|--|--|
|  | 0 |  +0.0 |  +0°10' |
|  | 0 | +0.0 | +0° 0' |
| Difference | | -0.0 | +0°10' |
| Recommendation | | OK | Calibrate Camber |



Result for toe is shown in the table under the toe icon.



Result for camber is shown under the camber icon.

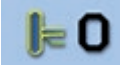


Press OK to return to the calibration menu.

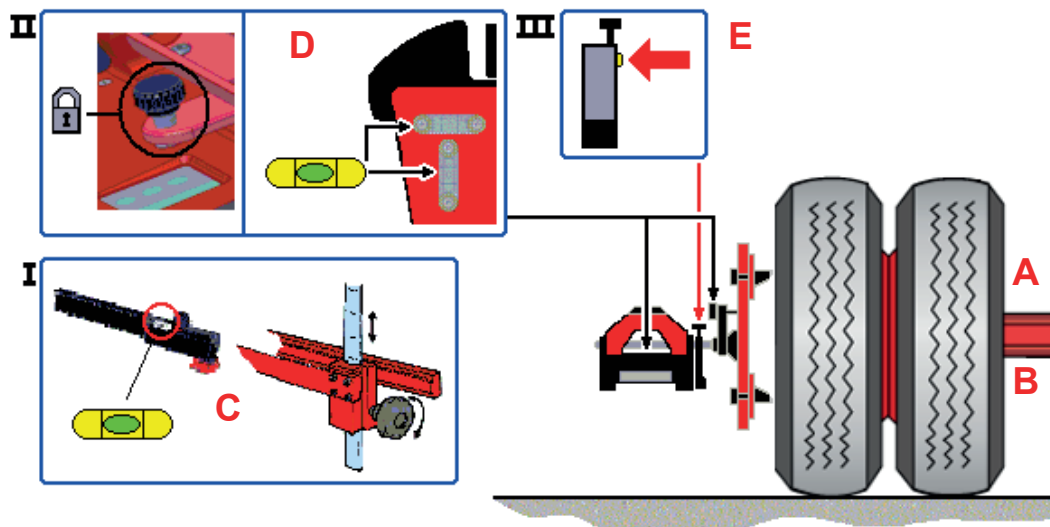
Blank Page

Toe Calibration

The toe calibration menu is used to calibrate the Toe angle function in the measuring heads. To do this perform a Toe measurement. The same measurement is the repeated with the measuring head turned upside down.

Enter the toe calibration mode by pressing 

Measuring head in normal position.

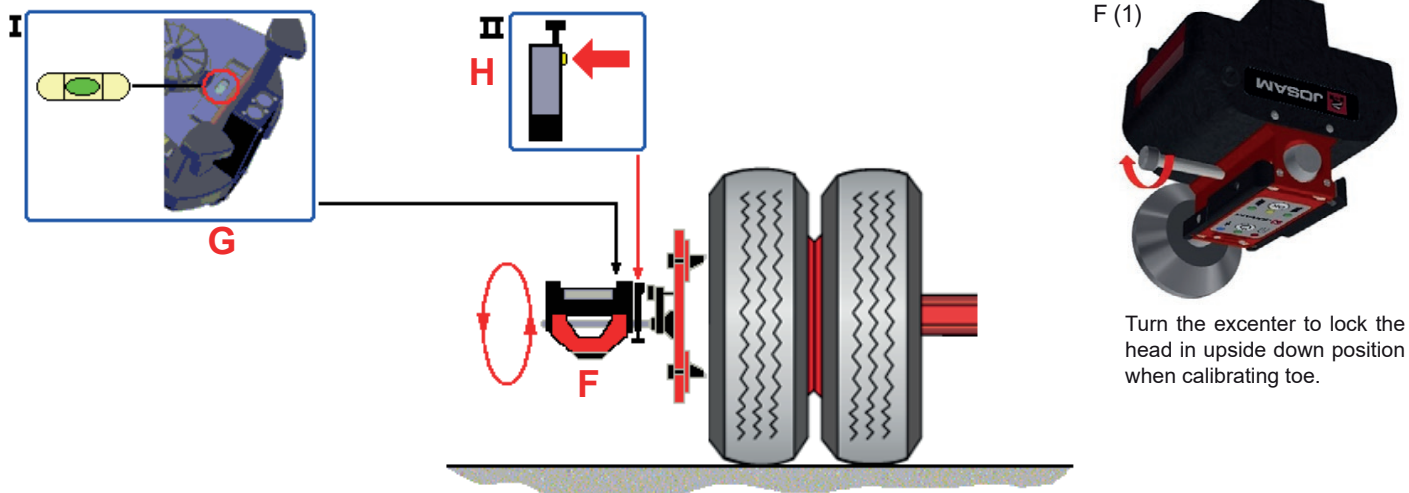


- A. Assemble a wheel clamp and measuring head on the left side of a non-steering axle. The distance to scale preferably 3 meters.
- B. The axle should **not** be jacked up.
- C. n/a
- D. Lock the measuring head to the wheel clamp axle by tightening the locking screw. Level the bubble on top of the measuring unit.




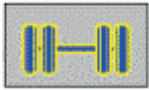

- E. Press the measuring button on the measuring head to get the values for the unit.


Rotate the Measuring unit 180




- F. Turn the measuring unit upside down
- G. Make sure the measuring unit is reasonably levelled.
- H. Press the measuring button on the measuring unit to get the values for the unit.

Results and Exit

| | | |
|---|---|----------|
|  |  | A |
| | +0.50 | |
|  | -0.50 | |
| Difference | +0.00 | B |
| Horizontal CCT | +0.00 | |
| Recommendation: | OK | |

- A. Toe results (non-steering) for measuring units in both directions shown.
- B. The difference between both the readings should not exceed 1' ~0,3 mm/m.
- C. If difference exceeds 1' a calibration of the measuring head is recommended.
- D. To calibrate the unit press .
If difference exceeds 1' the operator should perform the calibration procedure once more.

- E. Press to return to calibration menu. 

Menu Icons



Main

Main button will end the calibration and return to main menu.



Restore factory calibration

Choosing the restore factory calibration button resets the current calibration term (CCTT) to 0 (Zero). Visible only in step 4.



Calibrate head

Choosing the calibrate unit button write the correct calibration value to the measuring unit. Visible only in step 4 when the difference exceeds 0.20 mm/m.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.



OK

The OK icon is used after the last step has been completed and returns to the previous menu.

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog. When an error dialog is displayed, the execution of the current step is repeated.

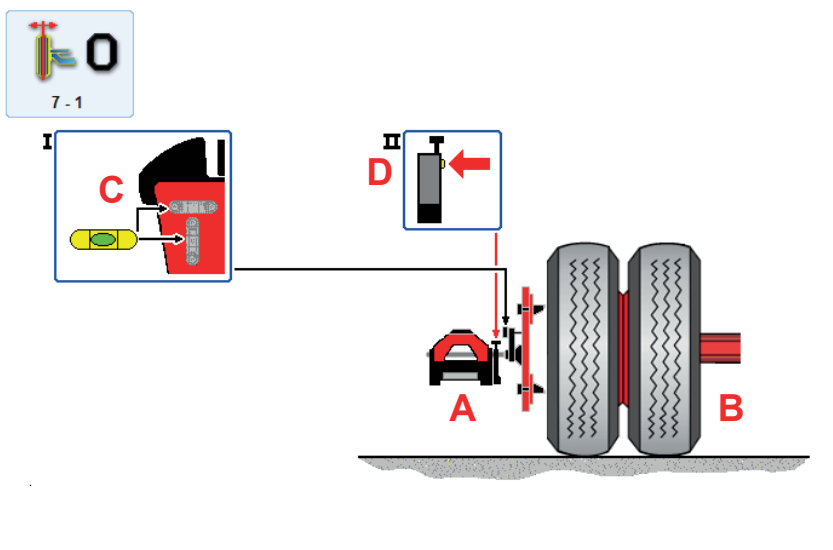
Blank Page

Camber Calibration

The camber calibration is used to calibrate the camber angle function in the measuring heads. To do this perform a Camber measurement. The same measurement is then repeated with the measuring head turned upside down. The measured values must be the same within limits.

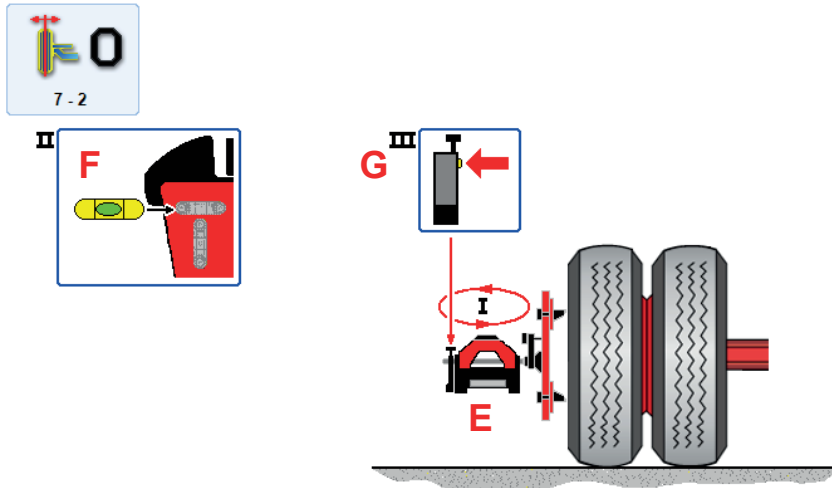
Perform a calibration

Measuring head in normal position.



- A. Mount wheel clamp and measuring unit at the left side of a non-steering axle.
- B. Axle not jacked up.
- C. Level the bubble on top of the measuring unit.
- D. Press the measuring button on the measuring unit to get the values for unit 1.

Measuring the head rotated



- E. Slide the measuring head of the axle and turn 180° horizontally. Slide the measuring head back on to the axle.
- F. Level the bubble on top of the measuring unit.
- G. Press the measuring button on the measuring unit to get the values for unit 2.


Results / Exit



| | | |
|-----------------|----------|--------------------|
| | A | |
| | | +0° 0' = +0.00mm/m |
| | | +0° 0' = +0.00mm/m |
| Difference | B | +0° 0' = -0.00mm/m |
| Vertical CCT | | +0° 0' = +0.00mm/m |
| Recommendation: | C | OK |

- A. Camber results (non-steering) for measuring units in both directions shown.
- B. The difference between readings should not exceed 1' ~0,3 mm/m. If difference exceeds 1' it is recommended to calibrate the measuring unit.
- C. To calibrate the unit press

D. If difference exceeds 1' the operator should perform the calibration procedure once more.

Press to get back to calibration menu .

If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog. When an error dialog is displayed, the execution of the current step is repeated.

Menu Icons



Main

Main button will end the measurement and return to main menu.



Restore factory calibration

Choosing the restore factory calibration button resets the current calibration term (CCTT) to 0 (Zero). Visible only in step 4.



Calibrate unit

Choosing the calibrate unit button will input the correct calibration value to the measuring unit. Visible only in step 4 when the difference exceeds 0.20 mm/m.



Left and right

The left- and right-buttons are used to scroll through the different steps. The measurement can be started/re-established at each step by pressing OK.




OK

The OK icon is used after the last step has been completed and returns to the previous menu. If an error occurs during a step, an error dialog is displayed. Pressing the OK removes the error dialog. When an error dialog is displayed, the execution of the current step is repeated.

Blank Page

Diagnose

The diagnose  menu displays the diagnose options for:

- Standard deviation after 100 measurements.
- Software version.
- Receivers test.

Toe Standard Deviation

Displays the deviation value per 100 measurements . Acceptable values should be less then 0,05 mm/m.

Unit 1: Standard deviation 0,025000 mm/m

Unit 2: Standard deviation 0,023000 mm/m

Software version

Displays program file version.

| Software Components release dates | |
|-----------------------------------|---------------------|
| TruckAlign.exe | Release 1.1 Build 6 |
| BitMap.dll | Release 1.1 Build 6 |
| JosamCb | Release 1.1 Build 6 |
| JosamCore | Release 1.1 Build 6 |
| JbcAdaptor | Release 1.1 Build 6 |
| JosamMisc | Release 1.1 Build 6 |
| ADSmartIO firmware | 0x1010, 0x42 |
| CE version | 4.10 Build 908 |

Receiver test

| | |
|--|----|
| Unit 1: Total Hits Right Receiver | 66 |
| Unit 1: Total Bins Right Receiver | 20 |
| Unit 1: Approved Bins Right Receiver | 3 |
| Unit 1: Total Hits In Approved Bins Right Receiver | 45 |
| Unit 1: Total Hits Left Receiver | 45 |
| Unit 1: Total Bins Left Receiver | 10 |
| Unit 1: Approved Bins Left Receiver | 3 |
| Unit 1: Total Hits In Approved Bins Left Receiver | 0 |
| Unit 2: Total Hits Right Receiver | 66 |
| Unit 2: Total Bins Right Receiver | 20 |
| Unit 2: Approved Bins Right Receiver | 3 |
| Unit 2: Total Hits In Approved Bins Right Receiver | 45 |
| Unit 2: Total Hits Left Receiver | 45 |
| Unit 2: Total Bins Left Receiver | 10 |
| Unit 2: Approved Bins Left Receiver | 3 |
| Unit 2: Total Hits In Approved Bins Left Receiver | 0 |

The receiver test checks the receivers and detects unwanted reflections. Unwanted reflections can distract the measuring heads when extracting readings from the scales.

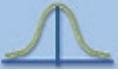
The laser rotates a number of times and checks for approved bins (good reflections) and other data. An ultimate result is 3 approved bins for each receiver.

Menu Icons



Main

Enter main menu.



Toe standard deviation

Truckaligner will test how much the toe value deviates during 100 measurements.



Software version

Shows information about program and dll-files.



Receiver test

To find out current receiver status for the measuring heads



OK

Choosing the OK icon displays the previous menu

Calibration Work Place

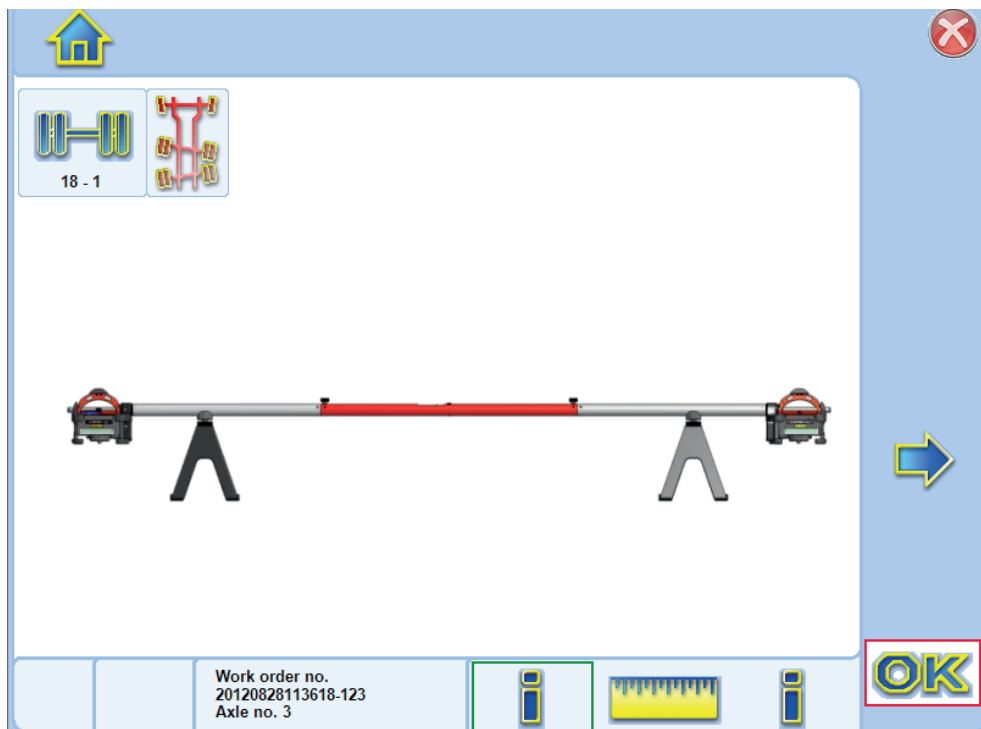
Calibrate your workshop regularly to ensure accuracy remains within limits.

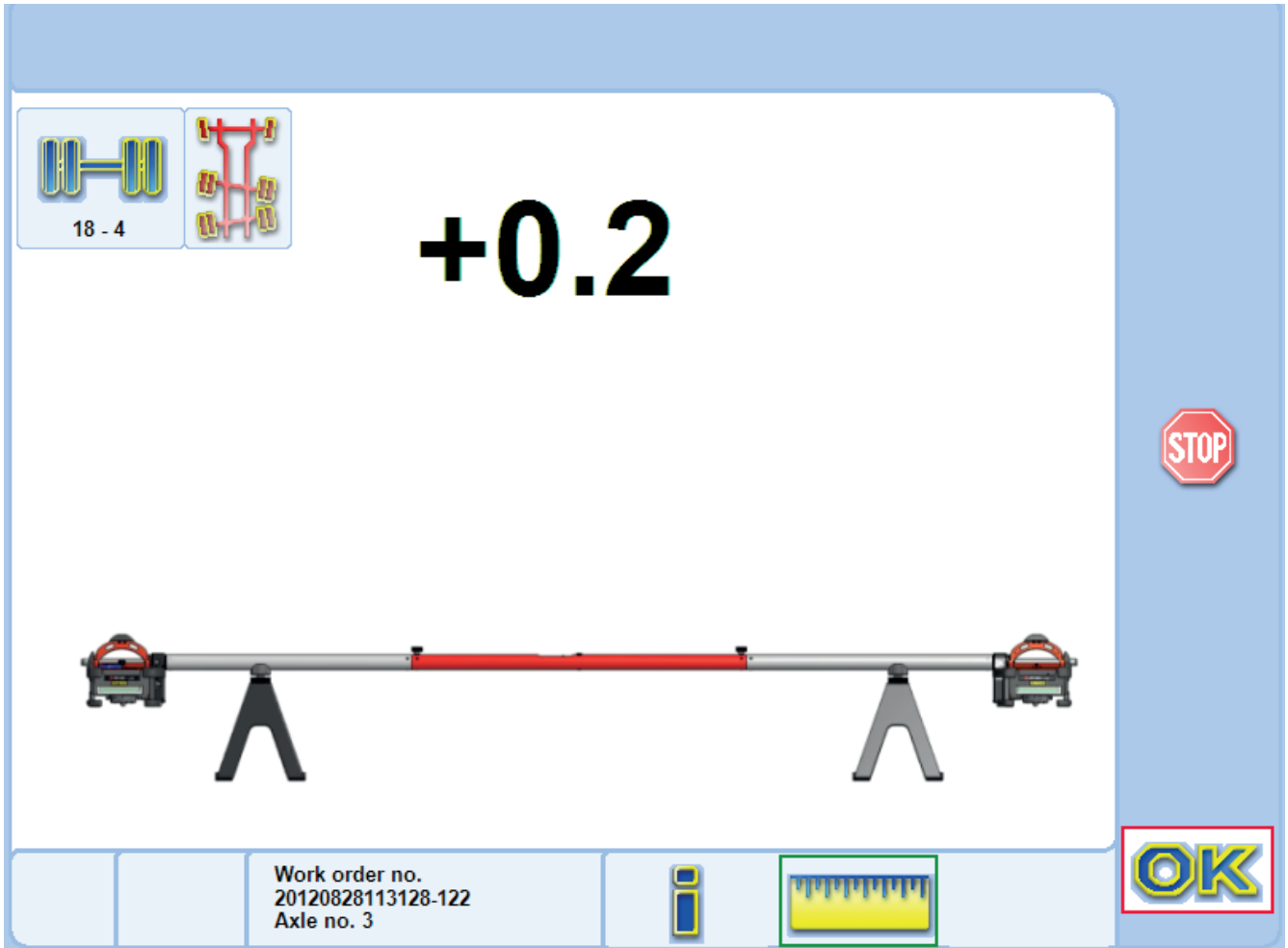
Use the installation and calibration procedures to perform a manual check. These instructions can be found on the CD provided on installation, or contact your local dealer.

Calibrate work place

Place the trailer bar on 2 stands straight approximately in the middle of the working bay parallel with the scales, and put it approximately in level using the bubble. Rotate the trailer bar so that the laser is parallel to the floor, when ready mount the both measuring heads on the trailer bar and press OK.

Rotate the trailer bar 180°, the laser should be parallel with the floor again in the opposite direction, and press OK.





The result shown should be within +/-0.1.

NOTE: THAT THE CALIBRATION IS A VERY SENSITIVE PROCEDURE AND SHOULD BE CARRIED OUT WITH HIGHEST PRECISION BY THE OPERATOR. A MISTAKE IN THE CALIBRATION PROCEDURE WILL RESULT IN FAULTY MEASURING VALUES.

NOTE: MAKE SURE THE MEASURING UNITS ARE PROPERLY CALIBRATED BEFORE THIS OPERATION. ANY CALIBRATION ERROR WILL SHOW AS A MIS-ALIGNMENT OF THE WORK BAY.

NOTE: WHEN IN DOUBT, CHECK THE INSTALLATION MANUAL ON HOW TO CHECK THE CALIBRATION OF THE WORKING BAY USING A TAPE MEASURE.

Menu Icons



Main

Main button brings you to the main menu.



Stop

Interrupts the current step. Visible only when measurements are performed.

A stopped measurement can be re-established with the OK-button, or terminated by using the main-button.



OK

OK button brings you back to the previous menu.

Blank Page

Tire Management



Blank Page

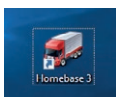
Getting Started

This manual describes the handling, function and components for Tire Manager.

Operating the system

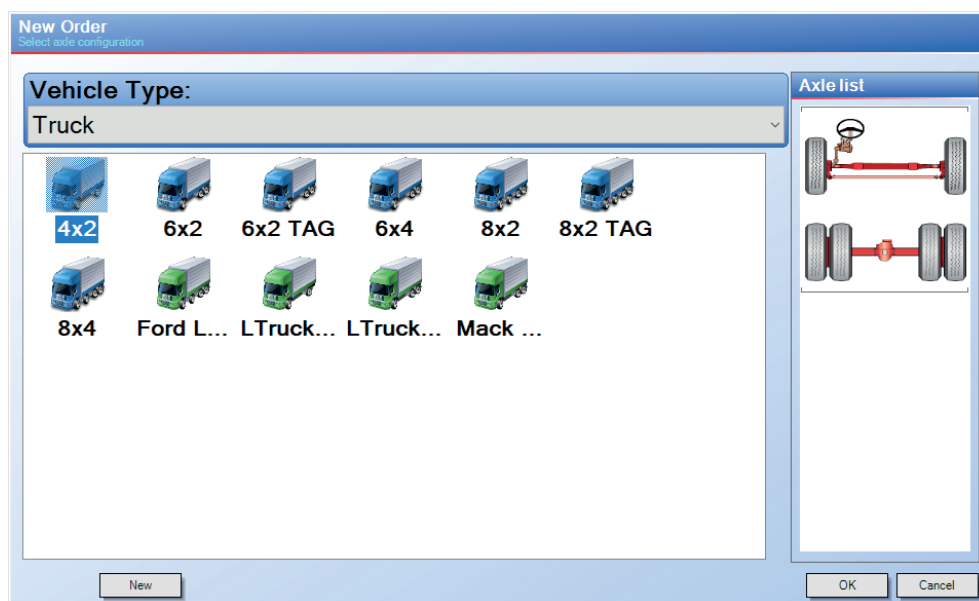
The Tire Manager, together with Homebase installed on a PC, is a measuring software designed for tracking tire wear. The Tire Manager is free to use in combination with a licenced product i-track.

Starting the Software



Start the software by clicking on the icon on the desktop menu.

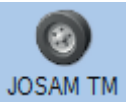
1. Select "Quick start" in Homebase and start a measurement without any additional information or create a work order in Homebase with all the required options. See the Homebase user manual for further information.
2. Select vehicle type and axle configuration (flow depends on which plugin is chosen for wheel alignment).

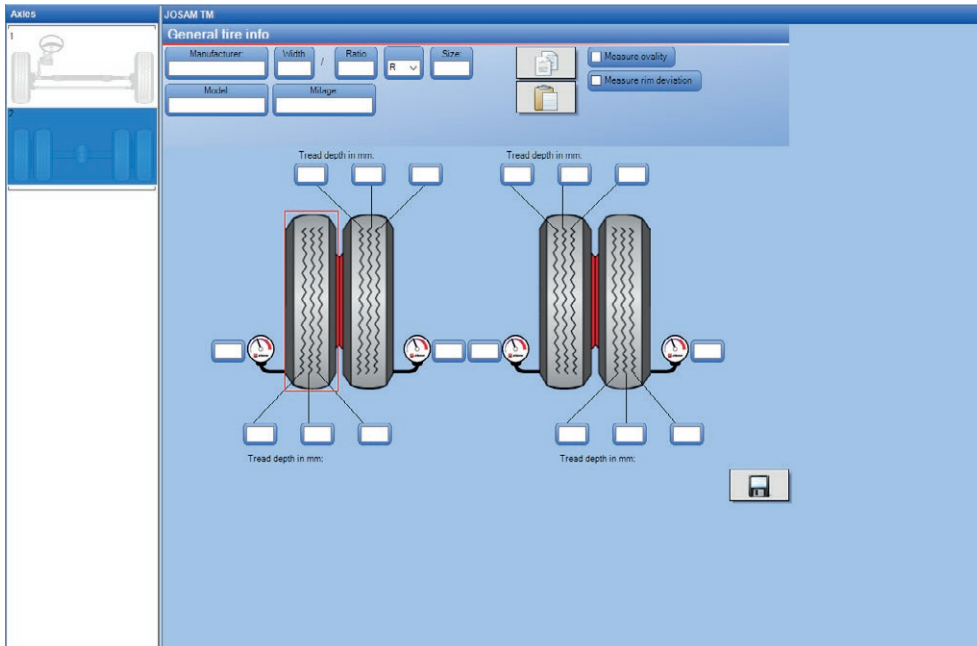


3. Enter the data, manufacturer, size, model, wear, pressure, etc.
 - Check tire pressure on all wheels.
 - Check that the correct tire type is assembled on each axle.
 - Check that the tires on each axle are of the same size.

Blank Page

Collecting Data

Click on  to enter the Tire Management software. The following dialog will be displayed.

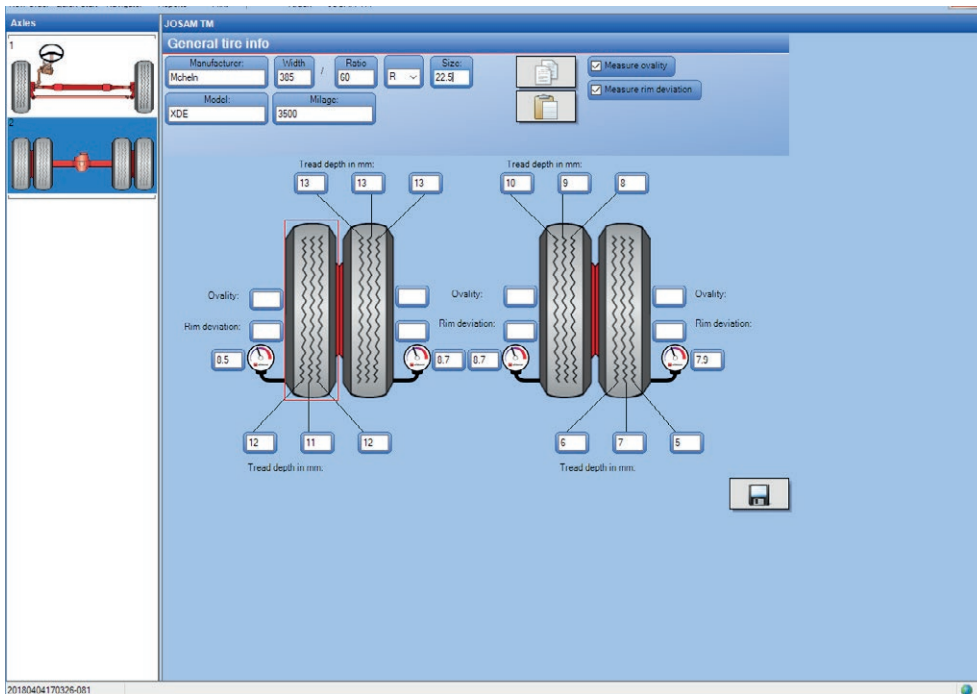


The screenshot shows the JOSAM TM software interface. On the left, there is a sidebar titled 'Axles' with a diagram of a vehicle chassis. The main window is titled 'General tire info' and contains the following fields:

- Manufacturer:
- Width:
- Ratio:
- Size:
- Model:
- Milage:
- Buttons:
- Checkboxes: Measure ovality, Measure rim deviation

The central part of the interface displays a diagram of two axles with four tires. Each tire has several measurement points indicated by small boxes and lines. The text 'Tread depth in mm.' is repeated near these points. A save icon is located at the bottom right of the main area.

The selected axle is highlighted in blue in the list to the left in the dialog window.



This screenshot shows the same JOSAM TM software interface, but with data entered and the selected axle highlighted in blue in the sidebar. The 'General tire info' section contains the following data:

- Manufacturer:
- Width:
- Ratio:
- Size:
- Model:
- Milage:
- Buttons:
- Checkboxes: Measure ovality, Measure rim deviation


The tire diagram now shows numerical values for measurements:

- Tread depth (top): 13, 13, 13, 10, 9, 8
- Ovality:
- Rim deviation:

The first axle in the sidebar is highlighted in blue. The software version '20180404170326-081' is visible in the bottom left corner.

General Information per tire



Information for each tire can be saved individually. When saving individually click on the tire to be saved, a red square will appear around the selected tire.

Enter information for each tire and press save  to save the results

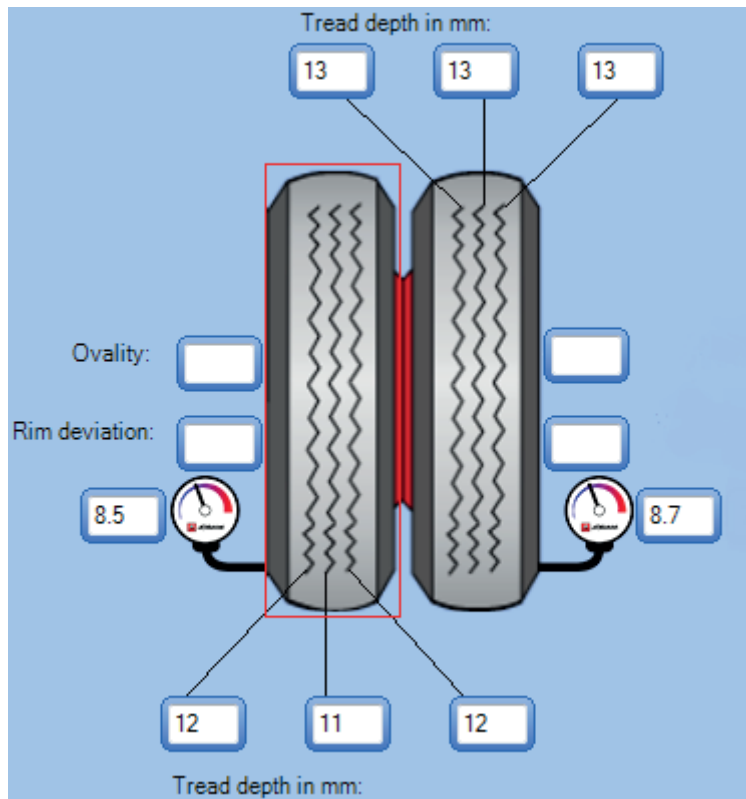
| General tire info | | | | |
|---------------------------|--------------|---|---------------|-------------------|
| Manufacturer: Michelin | Width 385 | / | Ratio 60 | Milage: 123456 |
| Model: XDE | R | | Size: 22.5 | |

- Manufacturer
- Width
- Tire size ratio
- Milage.
- Model
- Construction (Radial or Diagonal)
- Size

NOTE! REFER TO THE MANUFACTURERS SPECIFICATIONS FOR CORRECT TIRE PRESSURE AND POSITIONING OF THE TIRES.

Use the buttons copy  and paste  to copy general tire data so it can be used on the next axle.

Tire Status Data



- Thread depth (inner, middle and outer) [mm]
- Tire pressure [bar]
- Ovality [mm]
- Rim deviation [mm]

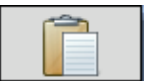
NOTE! REFER TO THE MANUFACTURERS SPECIFICATIONS FOR CORRECT TIRE PRESSURE AND POSITIONING OF THE TIRES.

Menu Icons



Copy

Copy general tire information to the clipboard.



Paste

Paste general tire information from the clipboard to the selected tire.



Save

Store data in the database.

Blank Page

Report and Preview

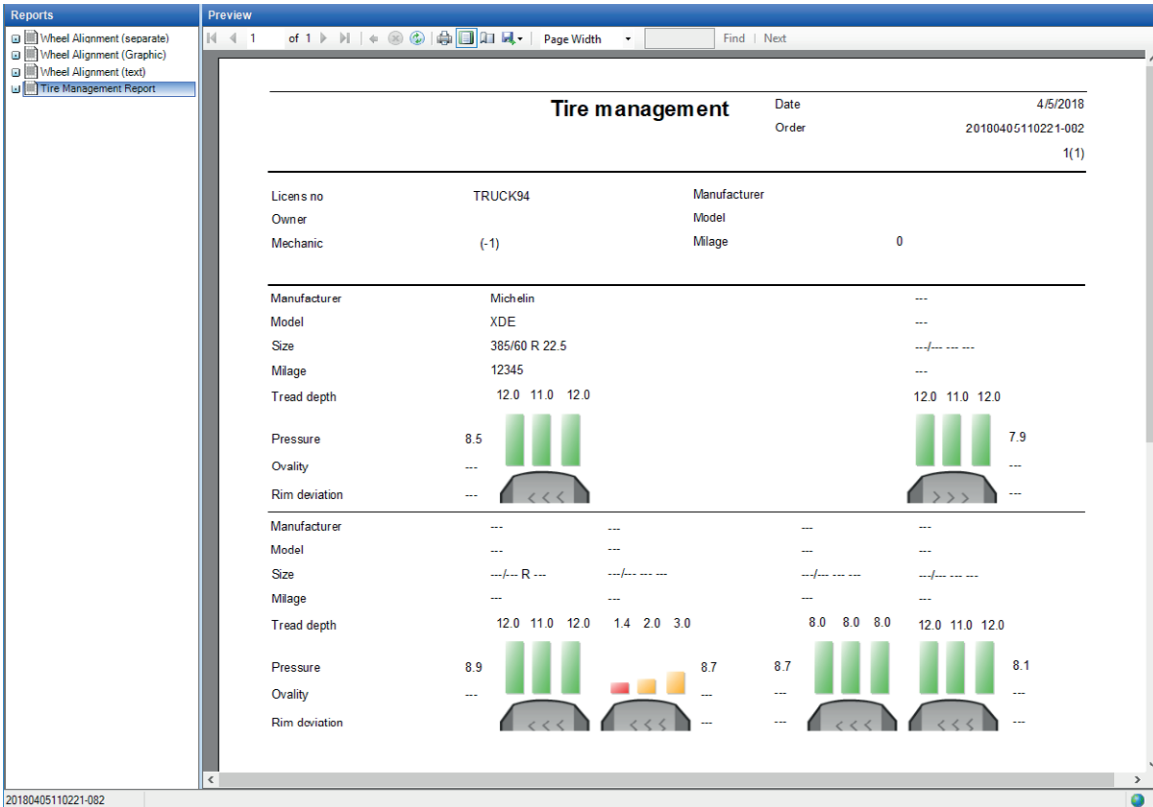
To create a graphical report, click on **[File]** and **[Tire Management Report]**.

The colors displayed on the bar graph inform the user of the legal status of the tire.

Red - illegal

Yellow - between legal and +2mm

Green - higher than legal and +2mm



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