

# VOLVO GROUP WHEEL ALIGNMENT

INCLUDING STATIC LPOS & FLS CALIBRATION



# BAD WHEEL ALIGNMENT WILL RUIN YOUR CUSTOMER'S ECONOMY!

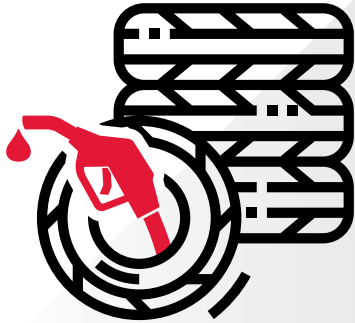
A properly aligned vehicle can reduce fuel consumption costs by up to 5%. Bad wheel alignment also increases tire wear. A wheel alignment diagnosis gives you the opportunity to plan ahead. With the help of the wheel angle measurements from a diagnosis, necessary adjustments can be made and you can avoid unnecessarily high fuel consumption and tire wear costs.

## CALCULATION EXAMPLE 1

Fuel cost reduction: 3%  
Mileage/year: 200 000 km  
Fuel price: 1.1 EUR/litre  
Fuel consumption: 4 litres/10 km  
Total cost reduction/year:  
 $0.03 * 200\ 000 * 1.1 * 0.4 = 2\ 640\ \text{EUR}$

## CALCULATION EXAMPLE 2

Premature tire change, 2 tires/year  
Tire cost: 350 EUR/tire  
Cost reduction/year:  
 $350 * 2 = 700\ \text{EUR}$



Estimated  
fuel/tire cost  
reduction per year:  
3 340 EUR\*

\* Cost for wheel alignment not included in the calculation

Source, fuel cost reduction:  
Survey performed during 2013 on 500 vehicles from 12 different companies  
by the research institute TNO, Holland

# WHAT HAPPENS WHEN THE WHEELS ARE MISALIGNED?



**BAD STEERING CAPABILITY AND DRIVING DISCOMFORT**

**MECHANICAL WEAR**

**INCREASED AIR RESISTANCE**

**INCREASED TRACKING SENSITIVITY**

**INCREASED FUEL CONSUMPTION**

**TRAFFIC HAZARDOUS VEHICLE**

**INCREASED TIRE WEAR**

# VOLVO GROUP WHEEL ALIGNMENT

This compact wheel alignment system enables truck and bus workshops, as well as tire service centers, to offer wheel alignment services quickly and accurately. With our patented camera technology with the chassis center line of the vehicle as reference, the following wheel angles can be measured:

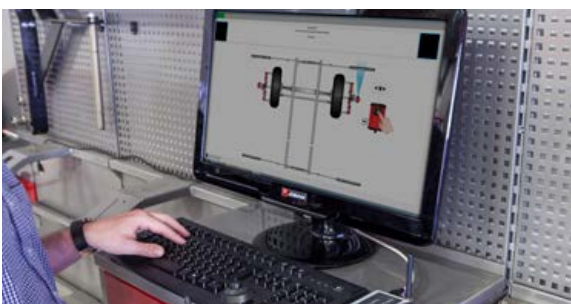
- Toe, steering box position, camber, out of square, parallelism and axle offset
- Caster, KPI, Toe Out On Turns and max turn

Enabled by the unique rolling method, toe and camber measurements may be taken while the vehicle is in driving position. No lifting of the axles with run-out compensation is required, alternatively the system can also be operated with standard run-out procedure.

Wireless technology is used for transmitting data between measuring units and the computer. The computer software guides the user through the measuring process and prints out measurement reports of values, before and after alignment.



## HEAVY VEHICLE ALIGNMENT WITH CAMERA TECHNOLOGY



Description	Specification
<b>Measuring range</b>	
Toe	±40 mm/m
Camber	±6°
Caster	±20°
KPI	±20°
Max. turn	65°
<b>Measuring accuracy</b>	
Toe	±0.2 mm/m (for each camera)
Camber	±3 min (for each camera)
Operational time	14 h
Charging time	3 h
Computer requirements	See latest updated information on <a href="http://www.josam.se">www.josam.se</a>



## MEASURING CASTER, KPI AND TURN ANGLES

This measurement is based on a single continuous movement of the wheels, from a straight ahead position to maximum left, via maximum right and back to the starting position.

During this procedure the built-in gyroscope and inclinometer are constantly transmitting data to the computer, which calculates the caster, KPI and turn angles in different wheel positions. The entire process can be carried out in a matter of minutes.

## STATIC LPOS & FLS CALIBRATION

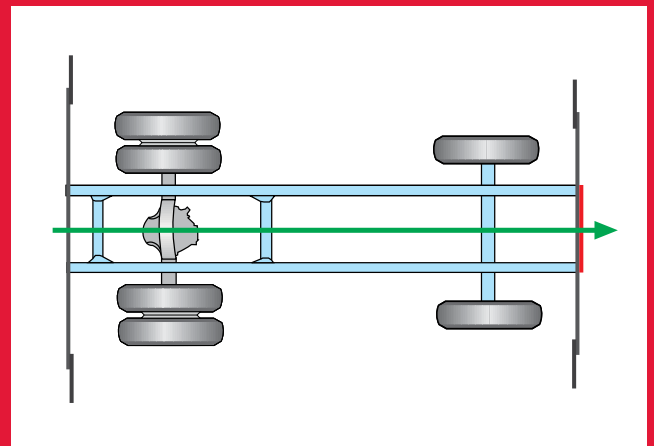
To calibrate the ADAS (LPOS & FLS) without having to drive the vehicle has many advantages:

- Only one operator is required.
- Safer, as the truck remains in the workshop.
- Avoiding traffic jams and bad road conditions.
- Supports OEM requirements on correct wheel alignment before calibration.
- Simple positioning for calibrating with Tech Tool.

## MEASUREMENT PRINCIPLE AND SCALABILITY

The Volvo Group wheel alignment system uses the centerline principle to determine the position of axles and individual wheels in relation to the centerline of the vehicle.

The system is designed to measure wheel angles on commercial vehicles such as trucks, trailers, buses and light commercial vehicles.



# VOLVO BASIC K/72250



## Basic kit for camera electronic wheel alignment (trucks)

Item #	Qty #	Ref nr	Name
1	1	VOLVO BASIC K	Basic set Cam-aligner



### OPTIONS

## CA TRAILER K/72104



### Additional kit for trailer and semi-trailer

Item #	Qty #	Ref nr	Name
1	1	CA TRAILER K	Additional kit for trailer and semi-trailer



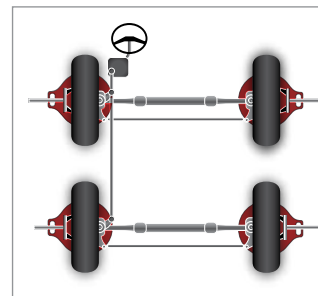
ALTERNATIVE 1

# CA TWIN K/72102

Additional kit for twin steer



Item #	Qty #	Ref nr	Name
1	1	CA TWIN K	Additional kit for twin steer



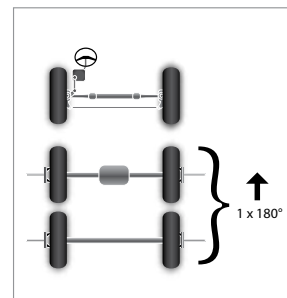
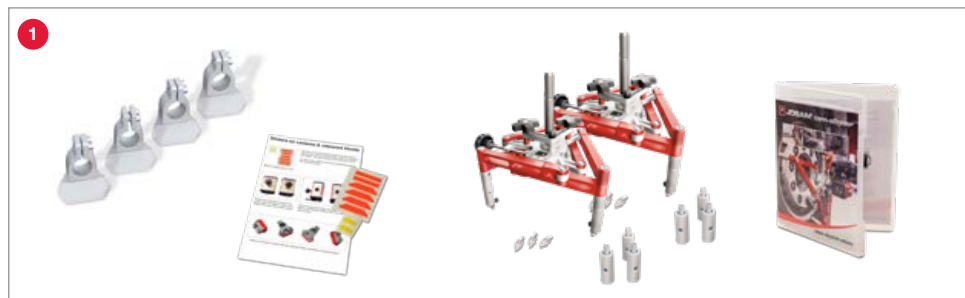
ALTERNATIVE 2

# CA MULTI K/72108

Additional kit for multi axle roll



Item #	Qty #	Ref nr	Name
1	1	CA MULTI K	Additional kit for multi axle roll



# CA ALU K/72103

Additional kit for aluminium rims

Item #	Qty #	Ref nr	Name
1	1	CA ALU K	Additional kit for aluminium rims



# CA ANGLE K A/75661

## Additional inclinometer kit

Item #	Qty #	Ref nr	Name
1	1	CA ANGLE K A	Additional inclinometer kit



An uneven floor will influence measurements of angles like camber, caster and KPI. By use of the inclinometer kit the Cam-aligner system will automatically compensate for all these effects.



## Additional front adapters

Make	JT734 15876	AM1622 10360	AM1854 15167	JT733 15875	JT73305 16355	AM1780 10439	AM1862 15767
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Volvo FE	(1 pc*)	2 pcs	—	—	—	—	—
Volvo FH (To 2011)	—	—	—	—	—	2 pcs	—
Volvo FH (From 2012)	—	—	2 pcs	—	—	—	—
Volvo FL	—	—	—	1 pc	(1 pc*)	—	—
Volvo FM (To 2011)	—	—	—	—	—	2 pcs	—
Volvo FM (From 2012)	—	—	2 pcs	—	—	—	—
Volvo FMX	—	—	2 pcs	—	—	—	—
Renault D narrow	1 pc	2 pcs	—	—	—	—	—
Renault D wide/C	—	—	—	1 pc	1 pc	—	—
Renault K	—	—	—	1 pc	—	—	—
Renault Premium Euro 6	—	—	—	—	—	—	2 pcs
Renault T & T-HIGH	—	—	2 pcs	—	—	—	—

\* Only needed when thread is missing



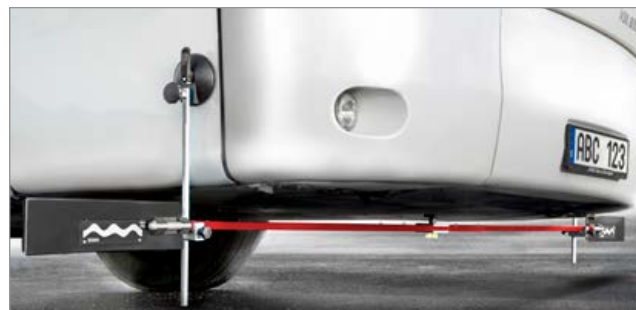


# CA BUS K/72244



Additional kit for buses and vans

Item #	Qty #	Ref nr	Name
1	1	CA BUS K	Additional kit for buses and vans



# CA IFS/72245

Additional kit for Individual Front Suspension (IFS)

Item #	Qty #	Ref nr	Name
1	1	CA IFS	Additional kit for Individual Front Suspension (IFS)



# CA 2011 K/74320



Electronic wheel alignment (trucks), upgrade from Laser AM -> Cam-aligner

Item #	Qty #	Ref nr	Name
1	1	CA 2011 K	Cam-aligner upgrade kit for JOSAM laser AM

1

LASER AM



↓



CAM-ALIGNER

PC-hardware is not included. For the latest PC-requirements please contact your representative.

# CA 2012 K/74321



Electronic wheel alignment (trucks), upgrade from Truckaligner I & II -> Cam-aligner


Item #	Qty #	Ref nr	Name
1	1	CA 2012 K	Cam-aligner upgrade kit for JOSAM truckaligner I/II

1

TRUCKALIGNER I/II



↓



CAM-ALIGNER

PC-hardware is not included. For the latest PC-requirements please contact your representative.

# 75675

## Upgrade your TruckCam system with new JOSAM software

Item #	Qty #	Ref nr	Name
1	1	75675	Software upgrade

1



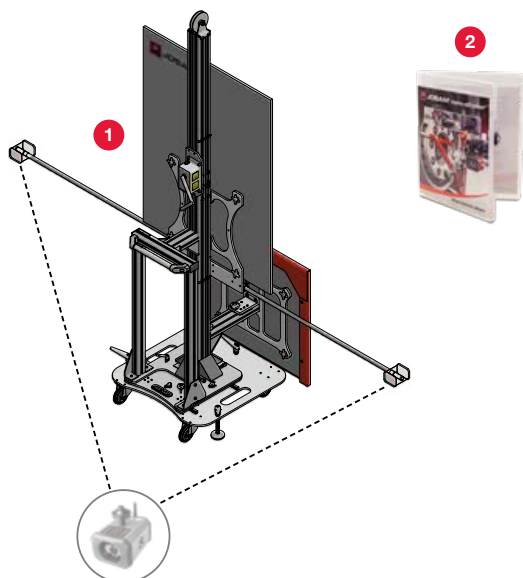
Requires TruckCam camera sensors TC-256 or TC-268.  
Upgrade is mandatory for static LPOS & FLS calibration.



# AM 1874 K/16345

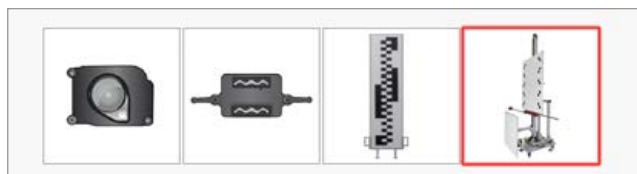
## Static LPOS & FLS calibration for camera based wheel alignment system

Item #	Qty #	Ref nr	Name
1	1	AM1874	Stand with LPOS & FLS targets
2	1	CA1109	Software add-on for ACC/LDWS



Radar & camera calibration requires the Volvo Group Wheel Alignment system and JOSAM cam-aligner software (version 1.7.4 or higher).

The device also works with the JOSAM i-track II kits 16499 and 16651.



# JOSAM I-TRACK II

## Wheel alignment as it should be, advanced yet simple

Josam i-track II is able to measure every vehicle from vans and buses to heavy-duty trucks and trailers, alone or in combination. It is even able to align huge construction vehicles such as cranes. The wheel alignment procedure is guided by an animated software, minimizing all possible operator's mistakes.



### I-TRACK II PREMIUM

I-track II premium allows you to measure a truck with up to five axles (three steered and two rigid), or a combined vehicle with up to six axles, with the base kit.

Universal magnetic wheel adapters are quickly attached to the wheel nuts, thereby easing operation on vehicles with aluminum rims. With additional wheel adapters, even more axles can be measured.



### I-TRACK II CLASSIC

I-track II classic allows you to measure a truck or combined vehicle with up to five axles with the base kit.

Universal wheel adapters are attached to the wheel rims. With additional wheel adapters, even more axles can be measured.

## Technical data

Description	Specification
<b>Measuring range</b>	
Toe	±25°
Camber	-5° ... +10°
Caster	±20°
KPI	±20°
Max. turn	60°
<b>Measuring accuracy</b>	
Toe	±0.25 mm/m*
Camber	±3 min*
Operational time	12 h
Charging time	5 h

\* For each measuring head

**Note:** To fulfill the Volvo Group demand to use the centerline as reference during wheel alignment, either centerline tool JT718 or TRAILER KIT CLASSIC should be added to the kits 16499 or 16651. See accessories on next spread.

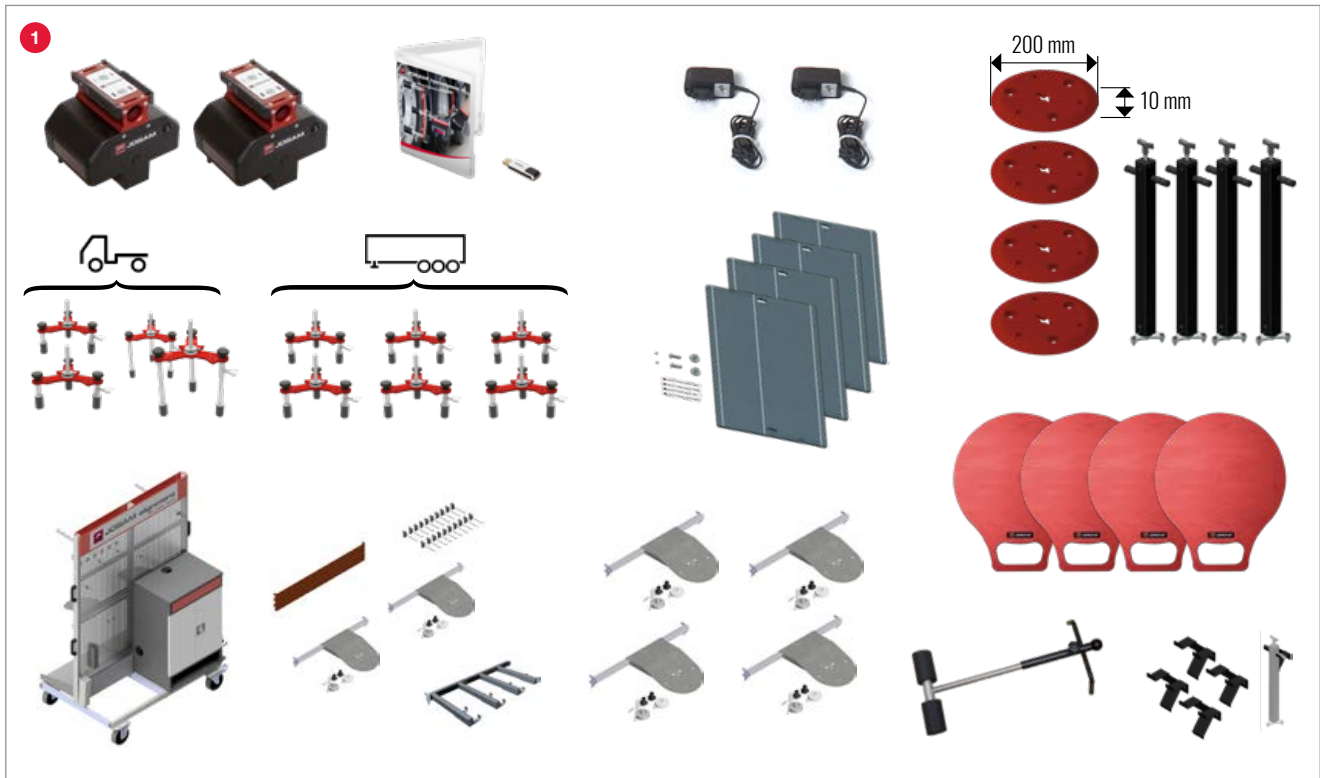
**Note:** Static calibration of FLS & LPOS is supported by the I-track software. Only calibration stand AM1874 needs to be added. See previous page.

# I-TRACK II PREMIUM, 16651

Electronic wheel alignment and diagnostic tool  
(trucks, buses and combined vehicles)



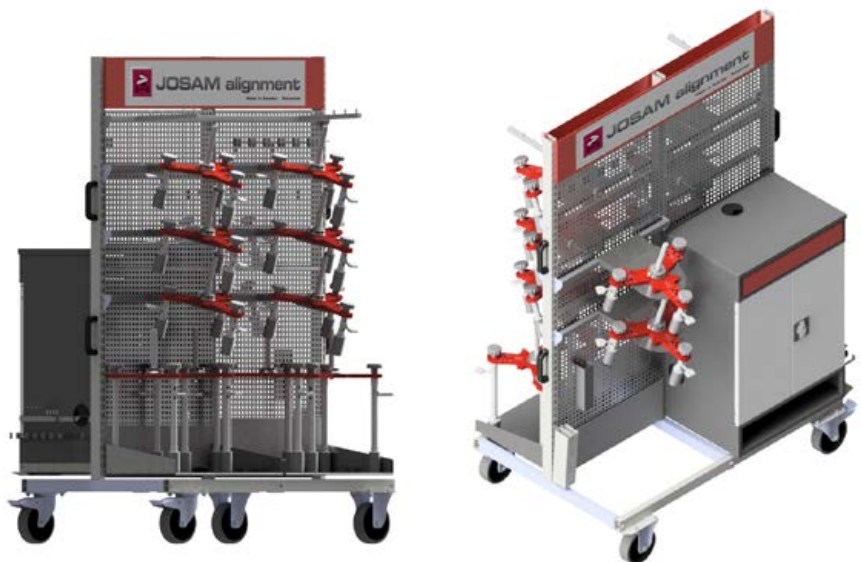
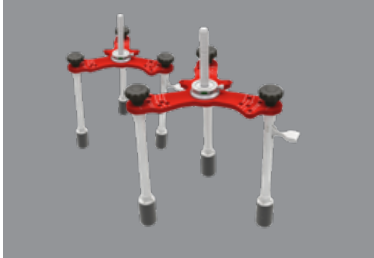
Item #	Qty #	Ref nr	Name
1	1	16651	Basic kit i-track II premium



**Disclaimer:** the magnetic wheel adapters JT732-1 and JT732-2 are designed to fit virtually all Volvo trucks (with standard flat nuts M22 and M24, as well as spanner sizes 33.0–37.5 mm). For domed nuts and smaller dimensions, a firm attachment can not be guaranteed.

## TWO FREE WHEEL ADAPTERS!

When ordering the I-track II premium kit, two additional wheel adapters JT732-2 are provided free of charge.

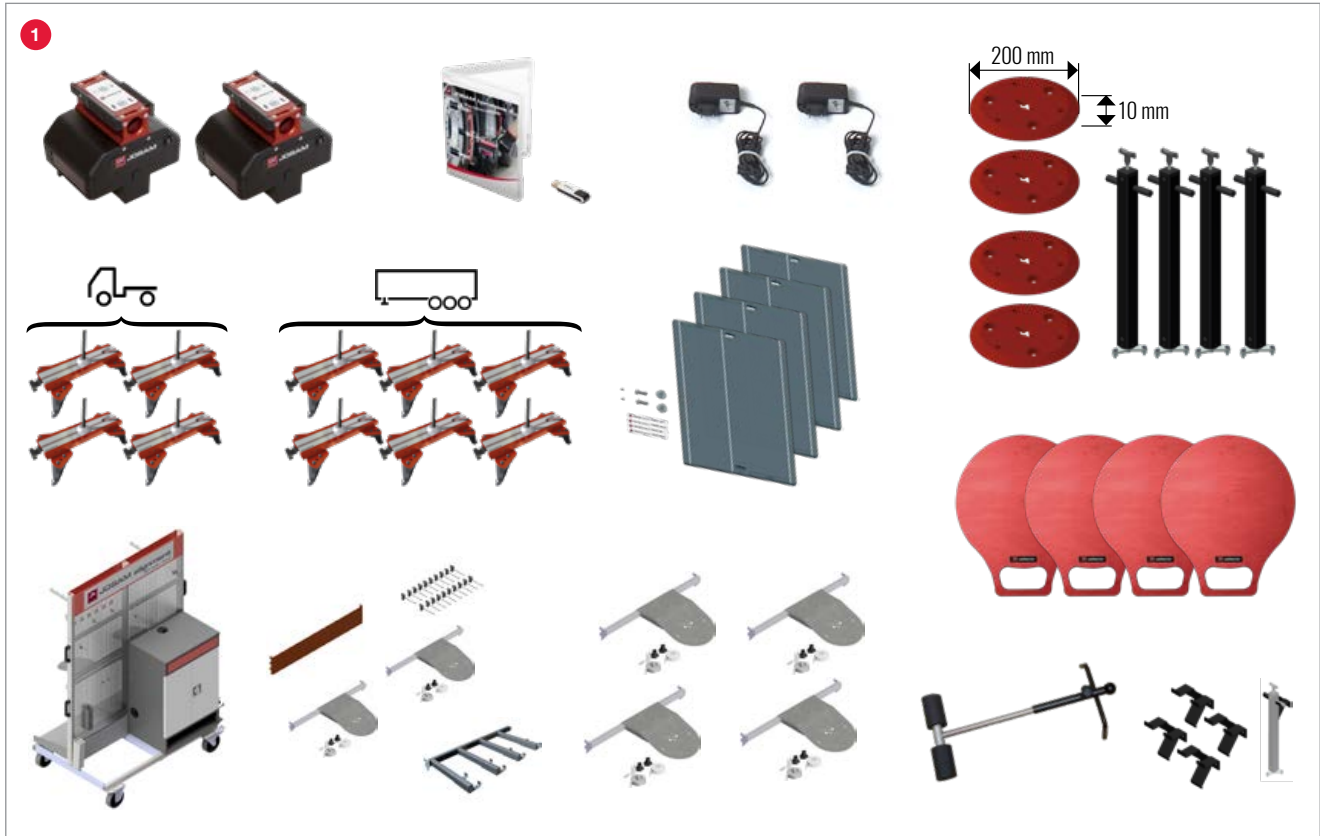


# I-TRACK II CLASSIC, 16499



Electronic wheel alignment and diagnostic tool  
(trucks, buses and combined vehicles)

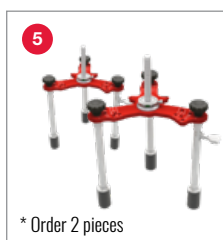
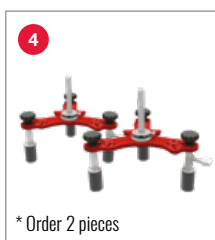
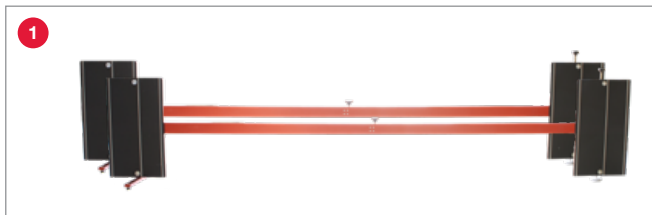
Item #	Qty #	Ref nr	Name
1	1	16499	Basic kit i-track II classic



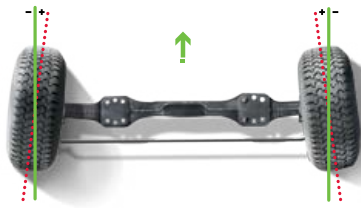
# I-TRACK II, OPTIONS AND ACCESSORIES

Electronic wheel alignment and diagnostic tool (trucks, buses and combined vehicles)

Item #	Qty #	Ref nr	Name
1	1	15562 / JT717	Additional kit, mobile targets scales
2	1	15563 / JT718	Additional kit for trailer/centre line
3	1	16522 / TRAILER KIT CLASSIC	Additional kit for (semi-)trailers
4	2*	16476 / JT732-1	Magnet wheel adapter, short
5	2*	16477 / JT732-2	Magnet wheel adapter, long
6	2*	16539	Pair of wheel adapters for light commercial vehicles/vans



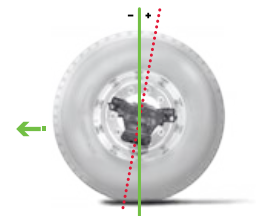
# THE VOLVO WHEEL ALIGNMENT SYSTEMS CAN MEASURE THESE WHEEL ANGLES:



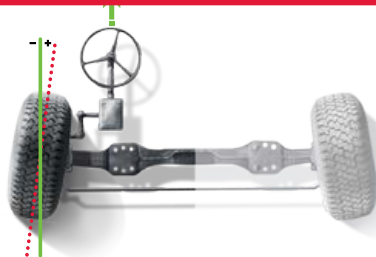
Toe



Camber



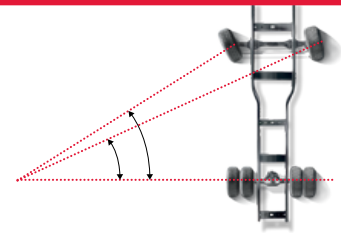
Caster



Steering gear middle position



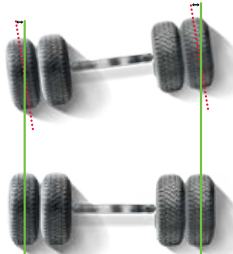
KPI



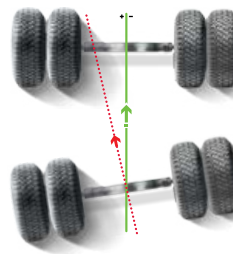
Toe-out on turn



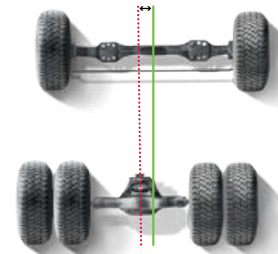
Maximum turn



Parallelism



Out of square



Offset

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