Powered by JOSAM

Volvo Group Wheel Alignment

Including static LPOS & FLS calibration

Last update: June 2019

Bad wheel alignment will ruin your customer's economy!

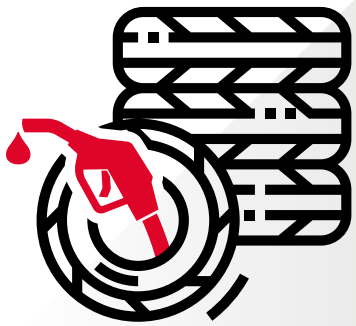
A properly aligned vehicle can reduce fuel consumption costs by up to 5%. Bad wheel alignment also increases tire wear. A wheel alignment diagnosis gives you the opportunity to plan ahead. With the help of the wheel angle measurements from a diagnosis, necessary adjustments can be made and you can avoid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

CALCULATION EXAMPLE 2

Premature tire change, 2 tires/year
Tire cost: 350 EUR/tire
Cost reduction/year:
350*2 = **700 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

Powered by JOSAM®

Heavy vehicle alignment with camera technology

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

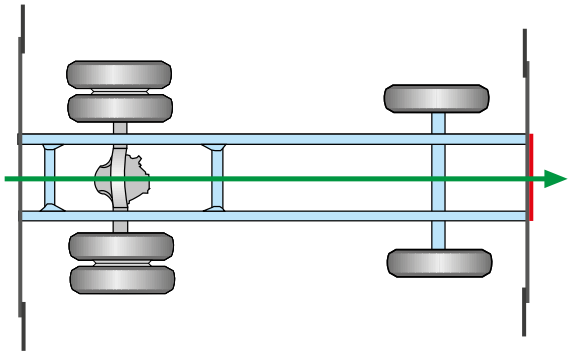
Enabled by the unique rolling method, toe and camber measurements may be taken while the vehicle is in driving position. No lifting of the axles with run-out compensation is required, alternatively the system can also be operated with standard run-out procedure.

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.

Technical information

Description	Specification
Measuring range	
Toe	±40 mm/m
Camber	±6°
Caster	±20°
KPI	±20°
Max. turn	65°
Measuring accuracy	
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 www.josam.se*

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.

Measuring caster, KPI and turnangles

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.

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

1

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

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

1

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

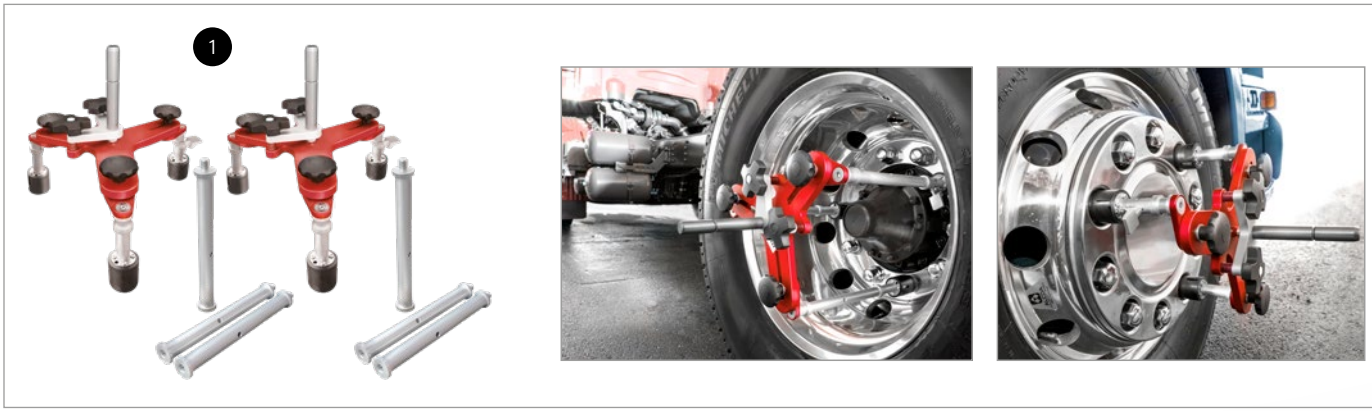
Additional kit for multi axle roll

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

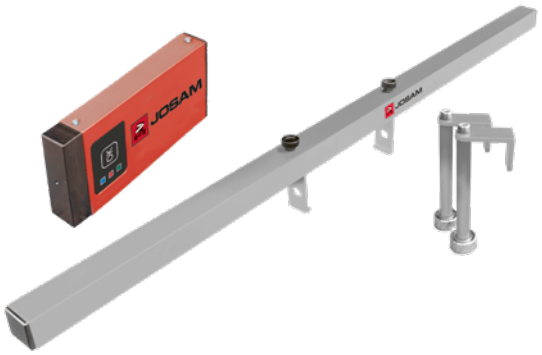


CA ANGLE K A/75661

Additional inclinometer kit

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

1

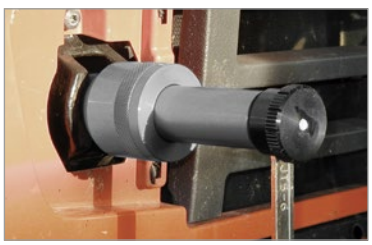


An uneven floor will influence measurements of angles like camber, caster and KPI. By use of the inclinometer kit the cam-aligner system will automatically compensate for all these effects.

Additional front adapters

Make	JT734 15876	AM1622 10360	AM1854 15167	JT733 15875	JT73305 16355	AM1780 10439	AM1862 15767
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

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

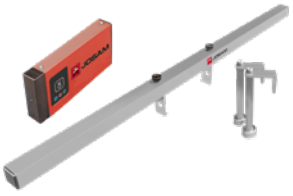
1

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)

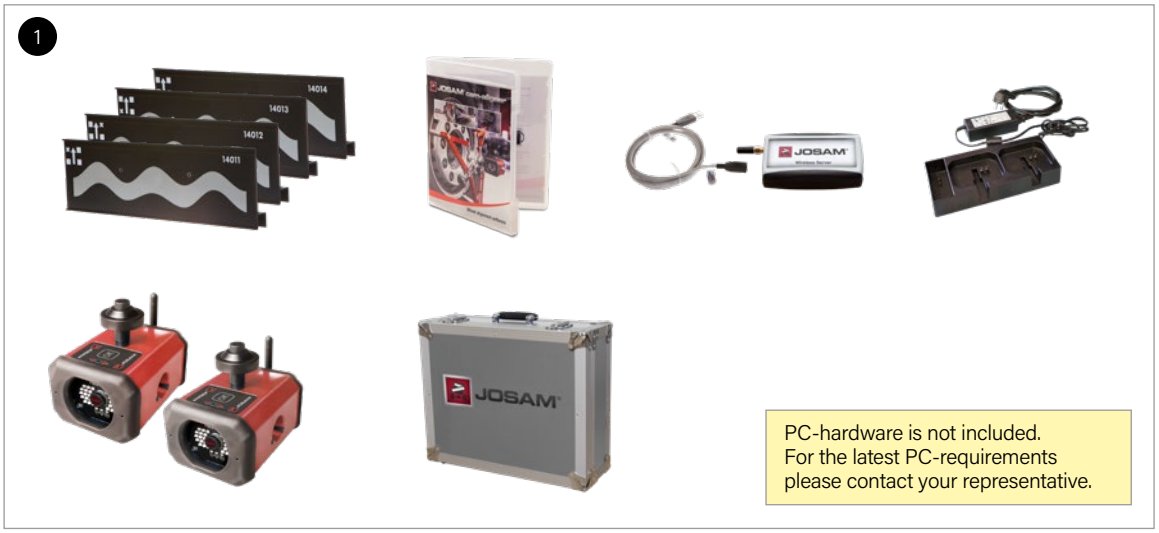
1



CA 2011 K/74320

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

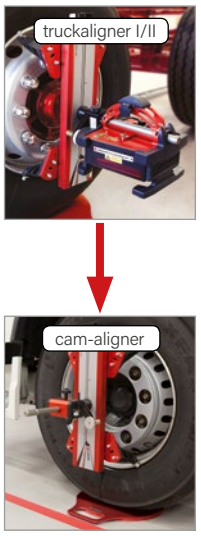
Item #	Qty	Ref nr	Name
1	1	CA 2011 K	Cam-aligner upgrade kit for JOSAM laser AM



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



75675

Upgrade your TruckCam system with new JOSAM software

Item #	Qty	Ref nr	Name
1	1	75675	Software upgrade

1

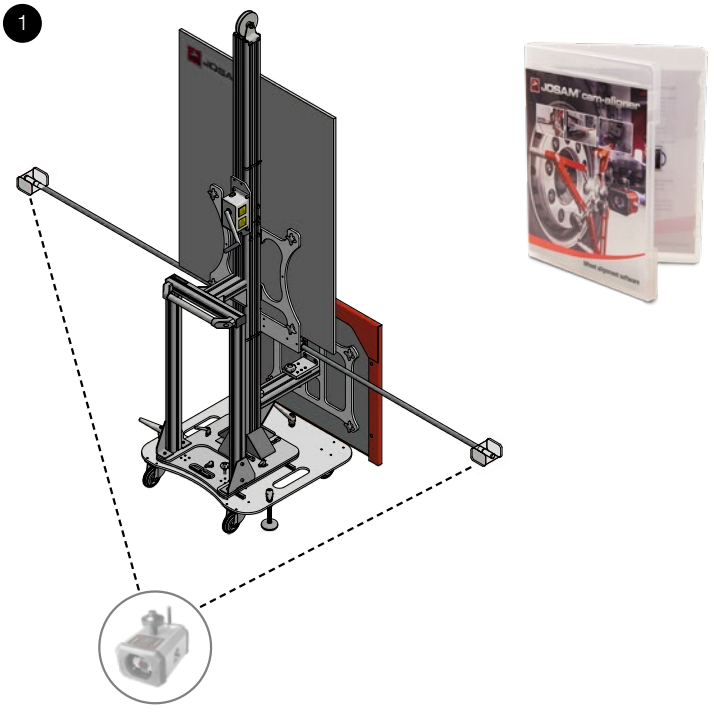
Requires TruckCam camera sensors TC-256 or TC-268.
Upgrade is mandatory for static LPOS & FLS calibration.

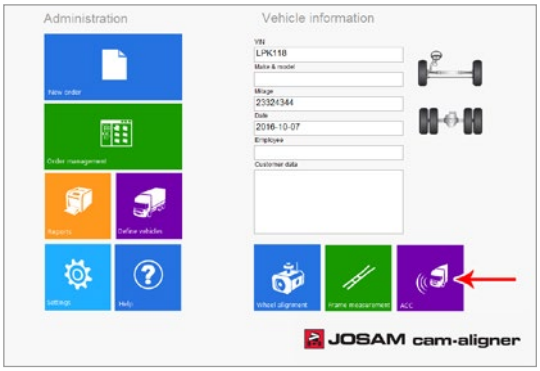
AM 1874 K/16345

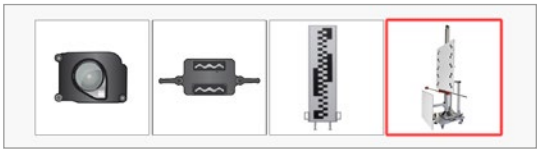
Static LPOS & FLS calibration for camera-based wheel alignment system

Item #	Qty	Ref nr	Name
1	1	AM 1874 K	LPOS & FLS calibration kit for camera-based wheel alignment system

1

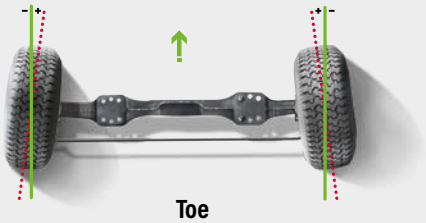






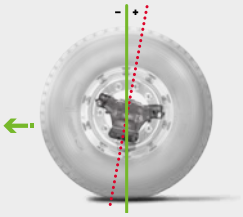
Radar & camera calibration requires the Volvo Group Wheel Alignment system and JOSAM cam-aligner software (version 1.7.4 or higher).

The VOLVO wheel alignment systems can measure these wheel angles:

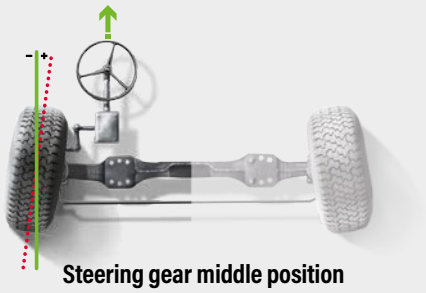


Toe

Camber

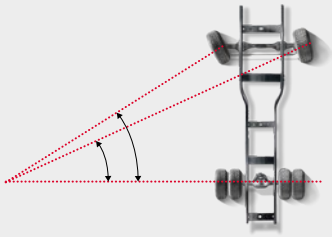


Caster



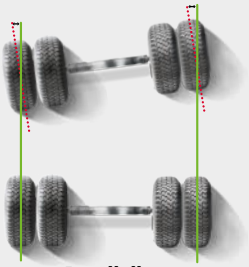
Steering gear middle position

KPI

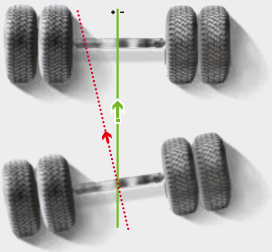


Toe-out on turn

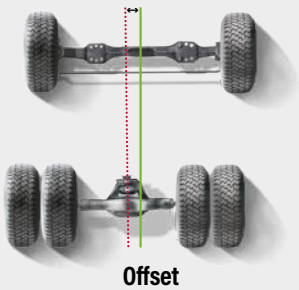
Maximum turn



Parallelism



Out of square



Offset

JOSAM is represented all over the world.
To find your nearest distributor, please visit www.josam.se

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