geoliner 920

HD TRUCK
WHEEL ALIGNMENT
SPI
(SIMULATED PERMANENT INSTALLATION)
DEMO PROCEDURE

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1.0 AREA SET UP

- Clear alignment area of obstacles
- Ensure sufficient clearance in front of and behind the vehicle
- Ensure clear line of site side to side
- Minimum length of alignment area approximately 45 feet
- Minimum width 11 to 16 feet

2.0 EQUIPMENT SET UP USING SPI SCALES

2.1 Bring the equipment to the alignment area
2.2 Connect the console to a wall outlet (110-1120 volts)
2.3 Turn the console “ON”
2.4 Start the geoliner920 Software application
2.5 Verify that the measuring heads (PODS) are connected and charging
2.6 Roll the wheel clamp carts in the alignment area
2.7 Position the turn tables on the wheel clamp stands
2.8 Assemble the SPI plates to the target poles scales if necessary
2.9 Position SPI at all four corners

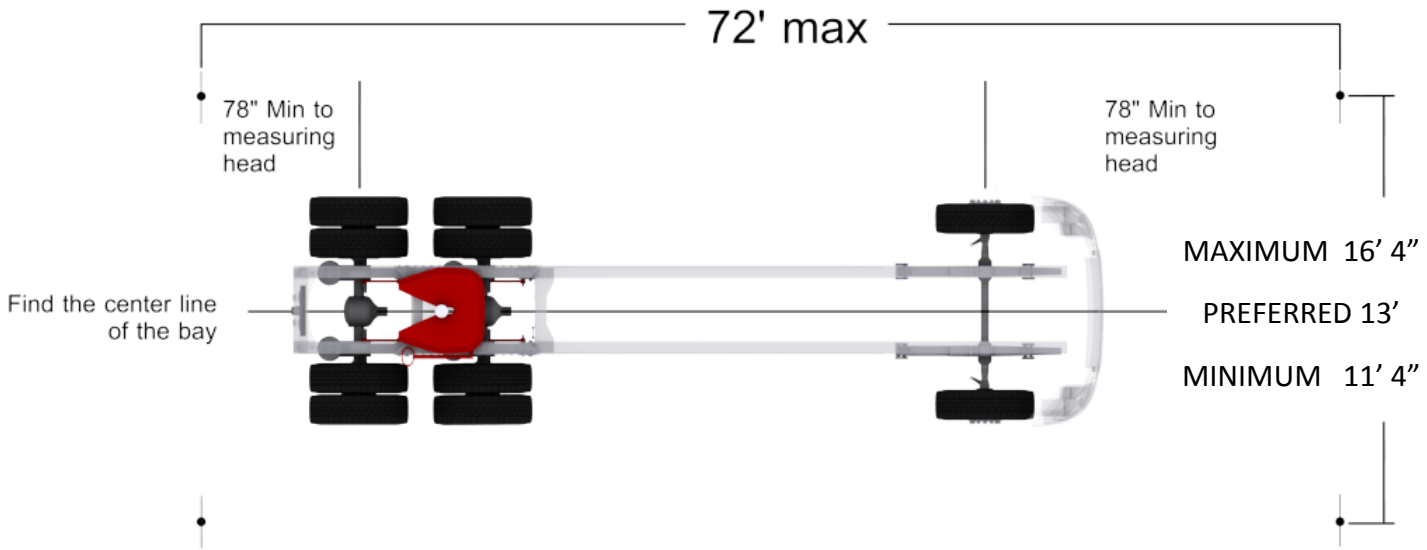
Geoliner920 HD Truck Equipment

REQUIRED INSTALLATION TOOLS

- 100 FT Tape measure
- Chalk line
- Chalk
- Level

3.0 VEHICLE SET UP

3.1 Bring the vehicle to the alignment area
3.2 Position the vehicle and allow 6 - 8 feet behind the vehicle
3.3 Position the vehicle and allow 6 - 8 feet in front of the vehicle
3.4 Proceed with vehicle pre-alignment inspection
3.5 Verify, document, and equalize tire pressures
    3.5.1 Verify and document tire types and sizes
    3.5.2 Observe and record tire wear patterns and tire position
    3.5.3 Adjust rear ride height if equipped with air suspension



3.6 Maximum distance between the front and rear target scales is 72' (Not the length of the bay)
3.7 When using the portable scales, a minimum of 6—8 feet is required at the back and the front

4.0 ASSEMBLING THE SPI PLATES (EAK0350J61A)

Final assembly

Target assembly

Floor base plate

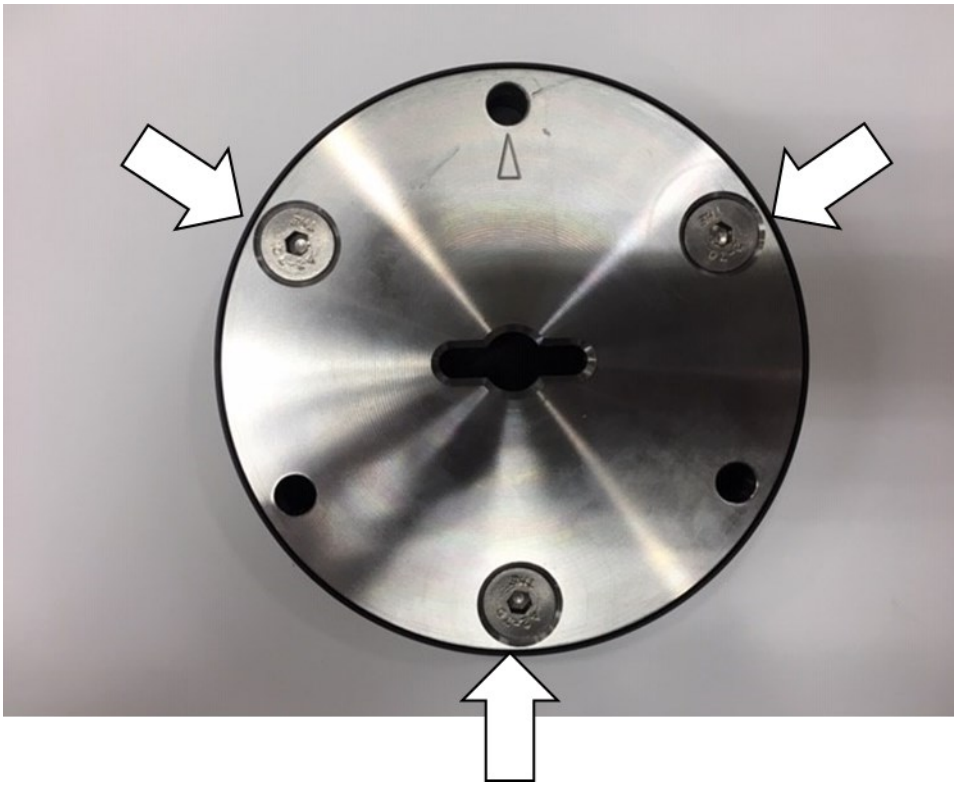
4.0 ASSEMBLING THE SPI PLATES (EAK0350J61A)

FLOOR BASE PLATE

TARGET POLE RECEIVER MOUNTING HOLES (3)

4.0 ASSEMBLING THE SPI PLATES (EAK0350J61A)

POLE RECEIVER PLATE



Remove all three screws and re-
move the plate

4.0 ASSEMBLING THE SPI PLATES EAK0350J61A)

RECEIVER BASE

The receiver base bolts to the floor plate using the three set screws

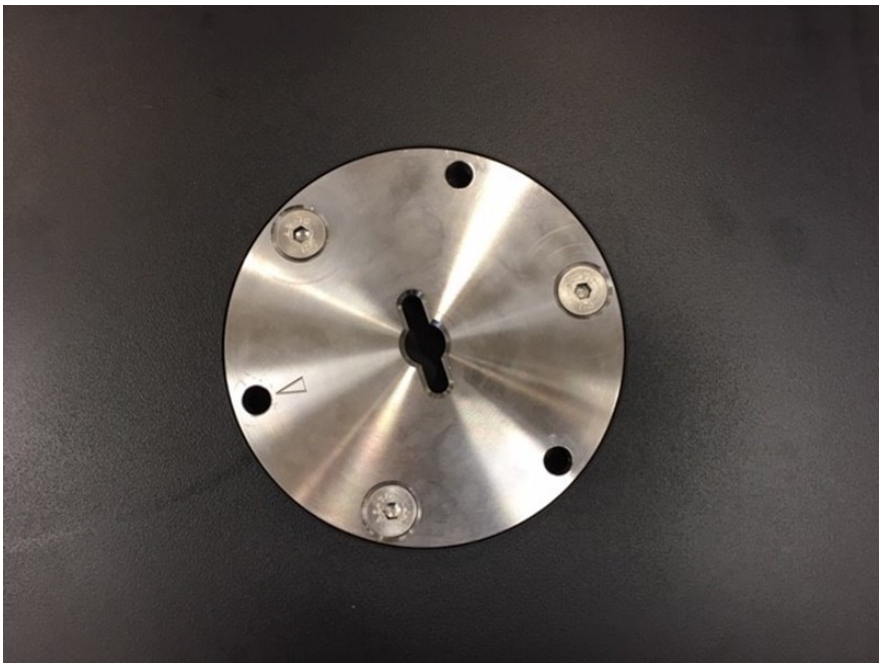
4.0 ASSEMBLING THE SPI PLATES EAK0350J61A)

Extend the set screws so that they protrude through the bottom on the receiver base

This will help in locating the holes on the floor plate

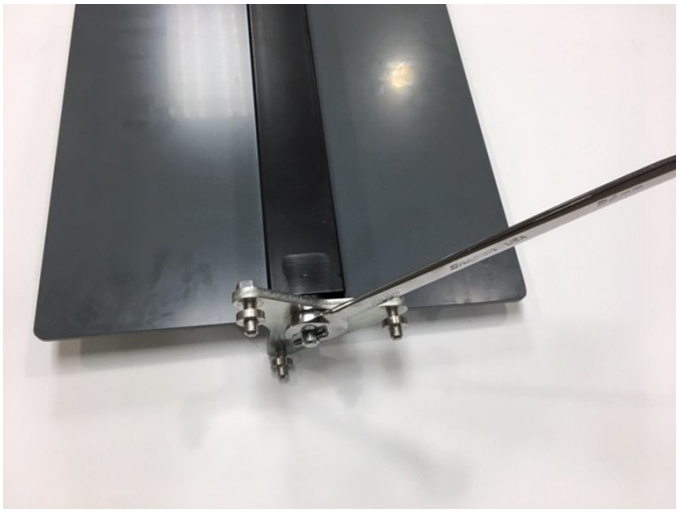
4.0 ASSEMBLING THE SPI PLATES EAK0350J61A)

Mount and tighten the receiver to the floor plate

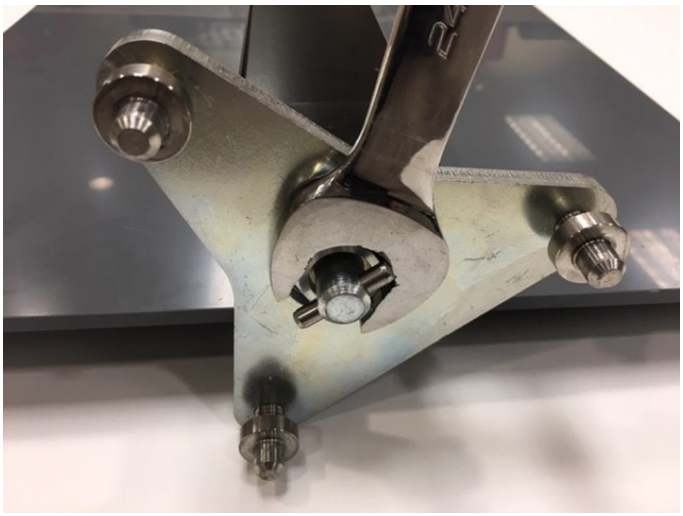


Mount and the target pole plate

5.0 ADJUSTING THE TARGET POSITION



Use a 24mm wrench to slightly loosen the nut on the target base.



The nut should be loosened only enough to be able to turn the base with medium force.

Insert the target assembly in the floor anchor.

Turn the target to square with the floor plate.

5.0 ASSEMBLING THE SPI PLATES EAK0350J61A)

Remove the target from the floor anchor and re-tighten the target base nut. Take care not to allow the base to turn while tightening the nut.

Reinstall the target assembly and ensure that the target remains square with the floor plate.

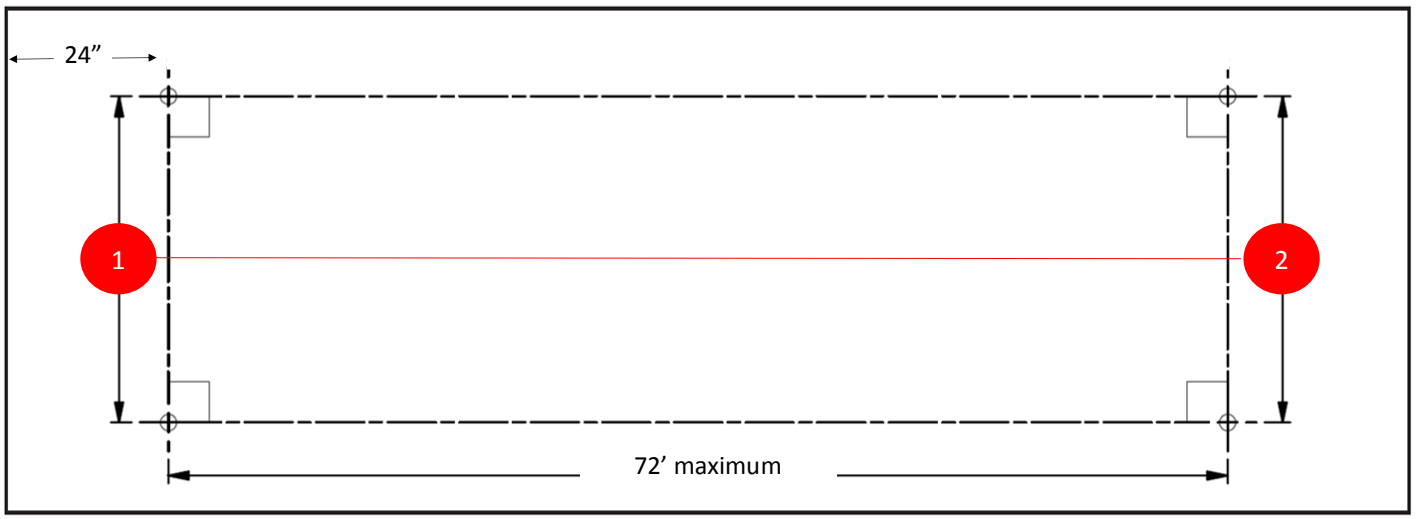
Label the floor plate with the appropriate target designation.

5.0 ASSEMBLING THE SPI PLATES EAK0350J61A)

Repeat this process for the remaining targets.

6.0 MARKING THE FLOOR FOR SPI (EAK0350J61A) SCALES

6.1 FLOOR MOUNT SPI LOCATION



REFER TO DRAWING JT66010 ON NEXT PAGE FOR RECOMMENDED DIMENSIONS OF THE WORKPLACE.

6.2 SPI SET UP FIND THE CENTERLINE OF THE AREA

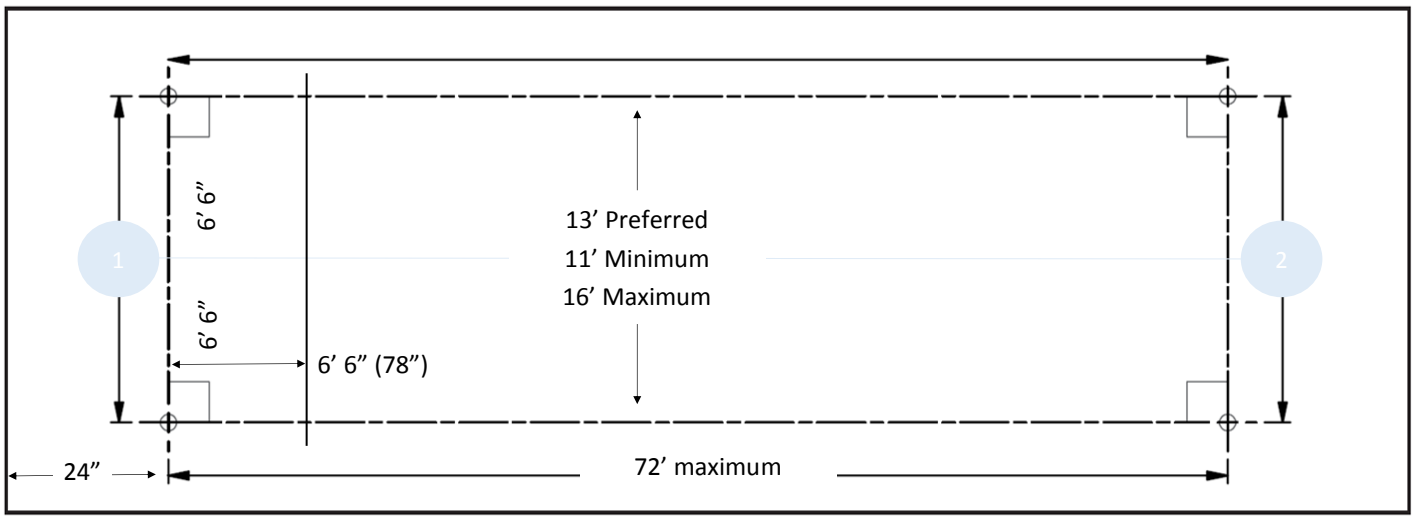
6.3 Measure center line of bay referencing off the door entrance and snap chalk line extending all the way to the front of bay where front targets will be mounted (Use the 3,4,5 method or mark line at front, off a wall and then snap chalk line). Call this line ‘A’

6.4 Depending on overall space in bay, it may be necessary to set chalk line square to the centre line ‘A’ and in from door opening, 1-2 feet. Call this line ‘B’

6.5 Snap chalk line to determine the distance where targets will be centered off this line (11 feet minimum, 16 feet maximum. Recommended is 13 feet to allow vehicle to drive through without the need to remove targets each time). Call this line ‘B’

6.0 MARKING THE FLOOR FOR SPI (EAK0350J61A) SCALES

6.6 FLOOR MOUNT SPI LOCATION



REFER TO DRAWING JT66010 ON NEXT PAGE FOR RECOMMENDED DIMENSIONS OF THE WORKPLACE.

6.7 SPI SET UP FIND THE CENTERLINE OF THE AREA

6.8 Snap chalk line to determine the distance where targets will be centered off this line (11 feet minimum, 16 feet maximum. Recommended is 13 feet to allow vehicle to drive through without the need to remove targets each time). Call this line ‘B’

6.9 From line ‘B’, measure towards the front of bay, taking in consideration of longest vehicle that will be aligned and having the roll forward compensation measurement along with required **minimum distance of 78 inches from the centre of rear axle to the rear targets** and after the roll forward, **minimum 78 inches from the centre of the front axle to the front targets**

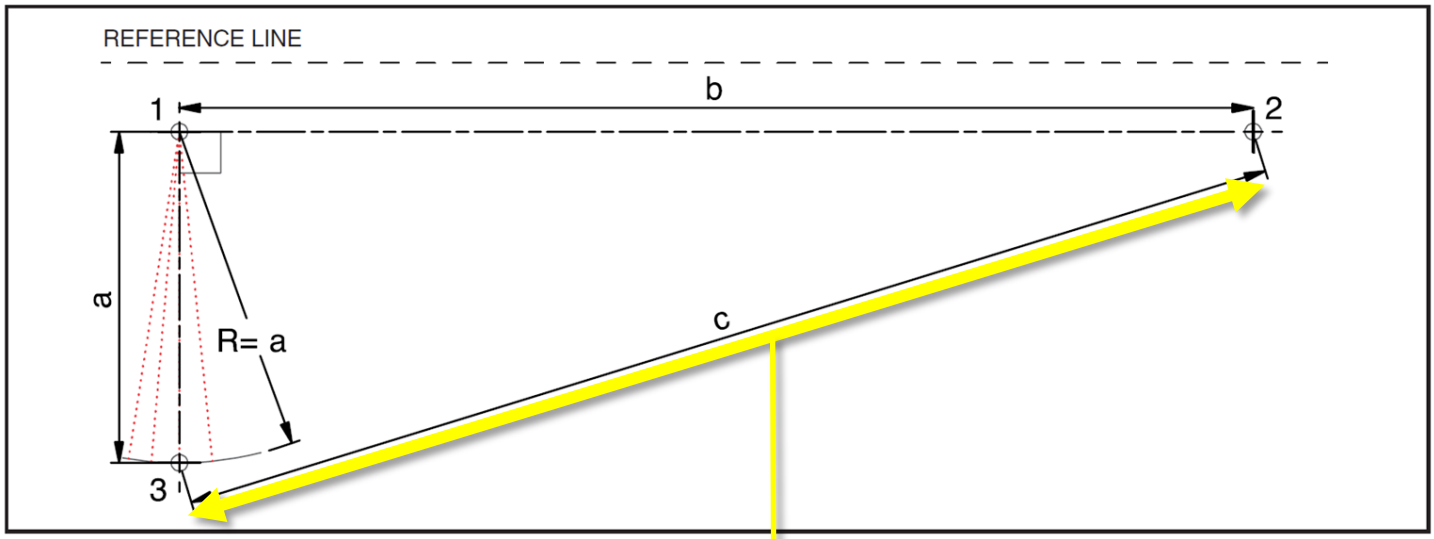
6.10 Snap chalk line to determine the distance where targets will be centered off this line (11 feet minimum, 16 feet maximum. Recommended is 13 feet to allow vehicle to drive through without the need to remove targets each time). Call this line ‘C’

6.11 Mark the intersecting lines off the centre of line ‘A’ equal to either side at line ‘B’ and ‘C’ (recommended 13 feet but depending on space available. **Example:** 6.5 feet off line ‘A’ to the left and 6.5 feet to the right of both lines ‘B’ and ‘C’ =13 feet). Call these points 1(front left), 2(front right), 3(rear left), and 4(rear right)

6.0 MARKING THE FLOOR FOR SPI (EAK0350J61A) SCALES

6.12 FLOOR MOUNT SPI (EAK0350J61A) LOCATION

Drill guide hole 1 and 2 with a specific dimension (b). Use a wall or a pit as reference if possible. Place guide pins in these holes. Measure hole 3 to dimension (a) and mark according to figure. Calculate the distance (c) using the equation and use a measuring tape from point 1 to point 3. Drill a hole where the two lines (a) and (c) intersect.



Length is presents the “b” line
Width is represented by “a” line
Hypotenuse is represented by the “c” line

	LENGTH																												
WIDTH	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45
11	73	71.85	70.86	69.87	68.88	67.90	66.91	65.92	64.94	63.95	62.97	61.98	61.00	60.02	59.03	58.05	57.07	56.09	55.11	54.13	53.15	52.17	51.20	50.22	49.24	48.27	47.30	46.32
13	74	73.01	72.04	71.07	70.10	69.13	68.16	67.19	66.23	65.26	64.30	63.33	62.37	61.41	60.45	59.49	58.53	57.58	56.62	55.67	54.72	53.77	52.82	51.87	50.93	49.99	49.05	48.11
16	76	74.75	73.80	72.85	71.90	70.96	70.01	69.07	68.13	67.19	66.26	65.32	64.39	63.46	62.53	61.60	60.68	59.76	58.84	57.92	57.01	56.10	55.19	54.29	53.39	52.49	51.59	50.71

EXAMPLE

13		60
		62.37

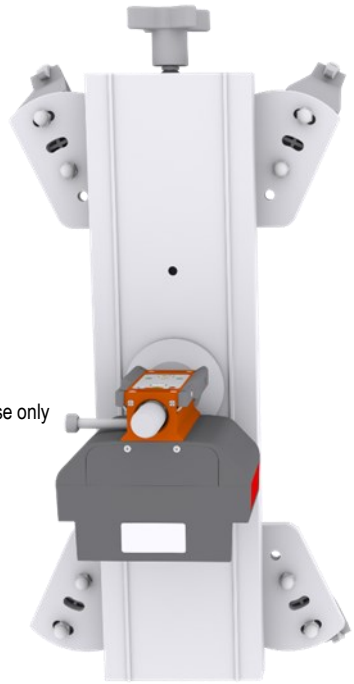
Hypotenuse “c”

7.0 WHEEL CLAMPS

7.1 Mount all necessary wheel clamps

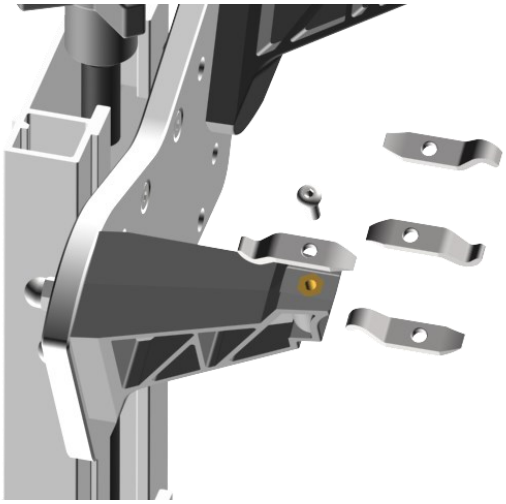
7.2 Secure the clamps snuggly onto the wheels

- 7.2.1 A 2 axle vehicle will require mounting 2 sets of clamps
- 7.2.2 A 3 axle vehicle will require mounting 3 sets of clamps
- 7.2.3 A 4 axle vehicle will require mounting 4 sets of clamps



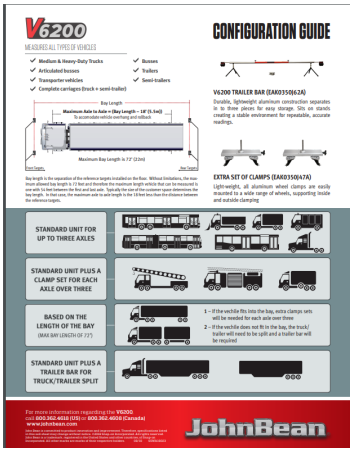
Not needed, for calibration use only

System supports up to 10 sets of clamps



Clamping jaws can be rotated to better fit the wheel type. Verify that they are all the same, on all the clamps

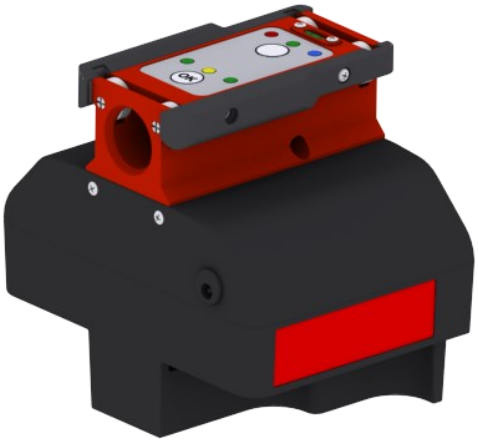
- The EEWA620B comes with 3 sets of clamps
- Additional sets of clamps ca be added, up to 10 sets total (Part number EAK0350J47A)
- See the HD truck configuration guide for more details



8.0 MEASURING HEAD

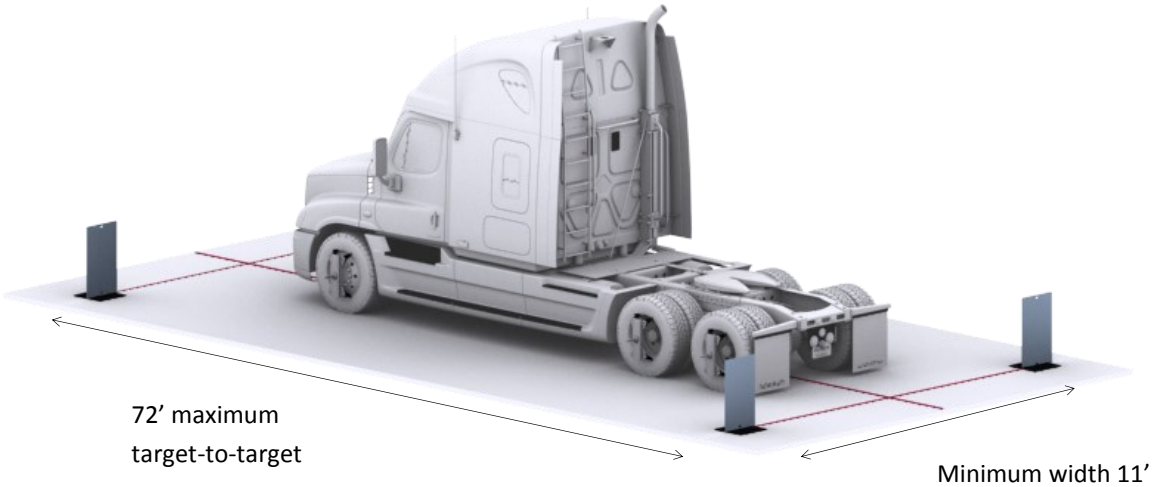
8.1 Mount the measuring heads (PODS) on the rear most axle
8.2 Slide the PODS on the clamp shaft until the PODS engages in the shaft groove
8.3 PODS can be mounted on either side of the vehicle

Alignment measurement start point



9.0 POSITION REAR SPI ASSEMBLIES

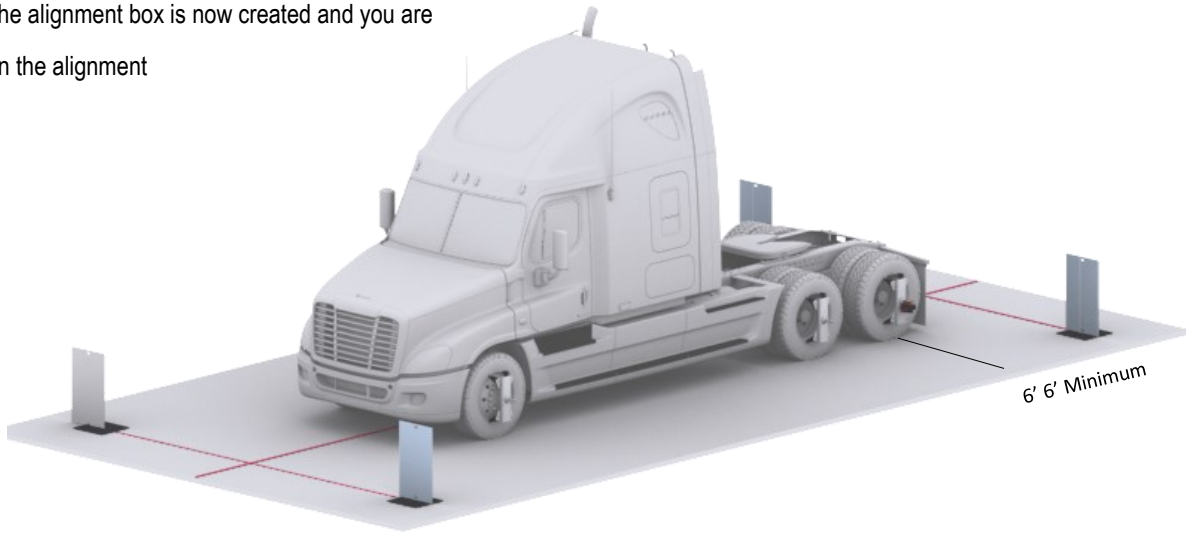
9.1 Position the rear target scale approximately 6 feet behind the vehicle
9.2 Center on the marks



10.0 POSITION FRONT SPI ASSEMBLIES

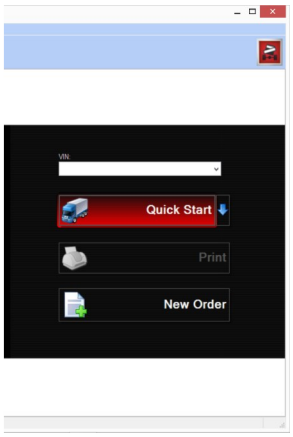
10.1 Position the FRONT targets
10.2 Center on the marks

At this point the alignment box is now created and you are ready to begin the alignment

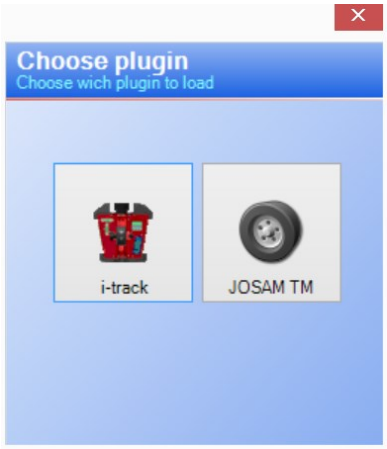


11.0 BEGIN | SELECTING THE VEHICLE

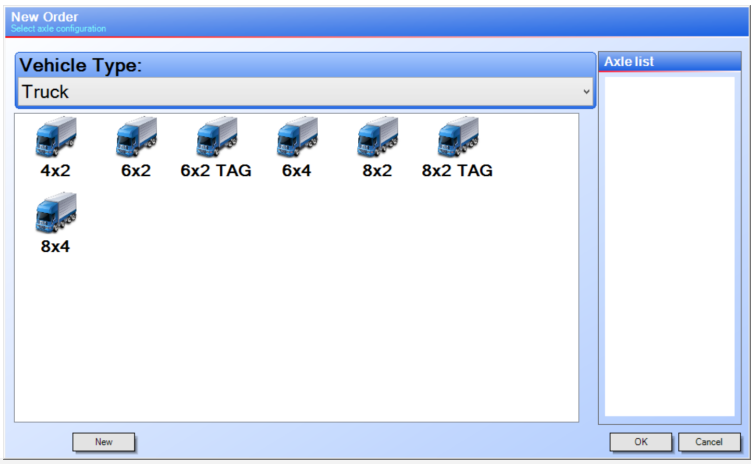
11.1 Click on QUICK START



11.2 Click on ITrack

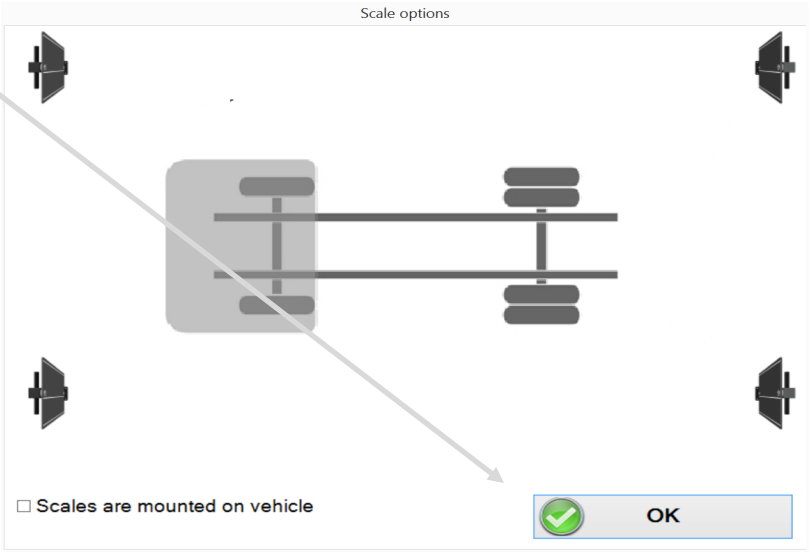


11.3 Select the vehicle type



11.0 BEGIN | SELECTING THE VEHICLE

11.4 Click OK on the SCALES OPTION



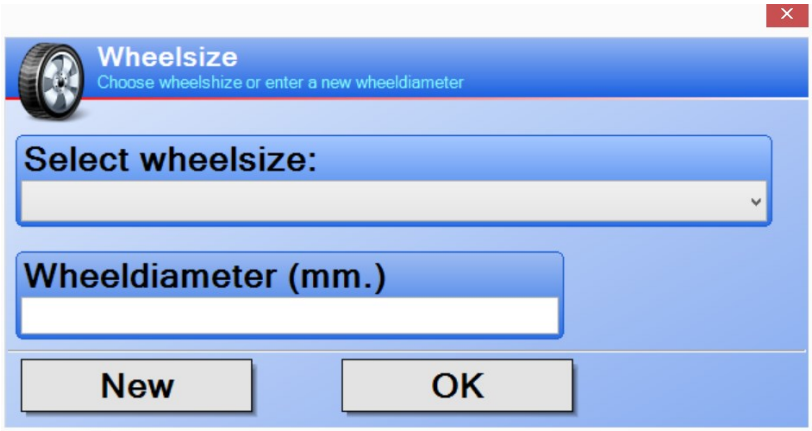
DO NOT CHECK THIS BOX

11.5 Select the WHEEL Size

Use the ARROW to open the drop down menu and expose the available wheel sizes

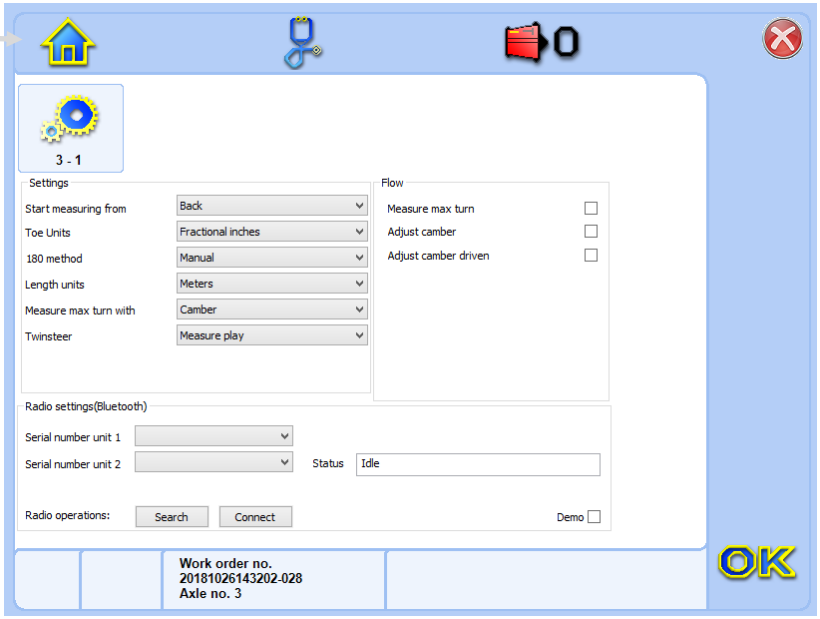
Click on NEW to enter and save a new WHEEL SIZE

11.6 Click OK



11.0 BEGIN | SELECTING THE VEHICLE

If this screen is visible, click on the HOUSE to change to the target scale set up screen

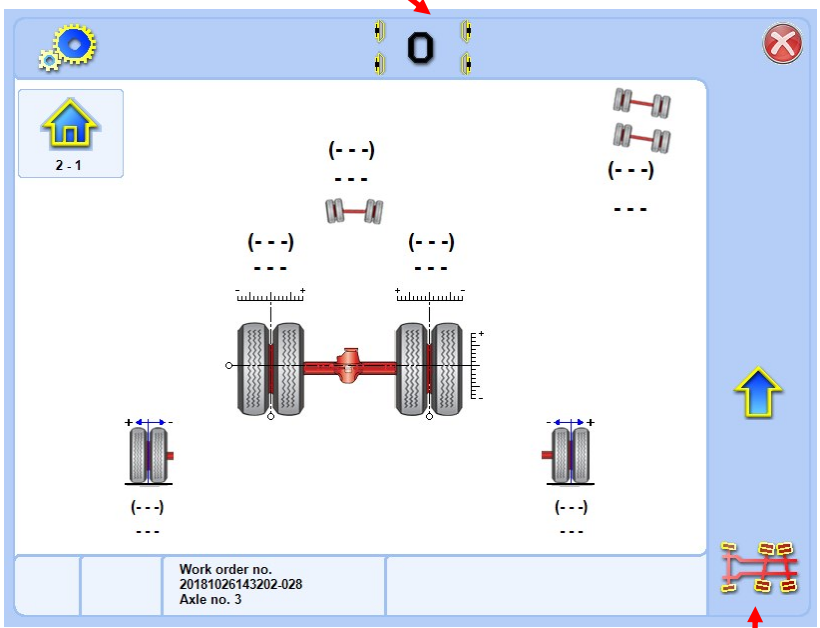


DO NOIT CLICK HERE TO START COMPENSATION PROCEDURE

11.7 Click on the MEASUREMENT ICON

This selection will guide you the correct placement of the target scales

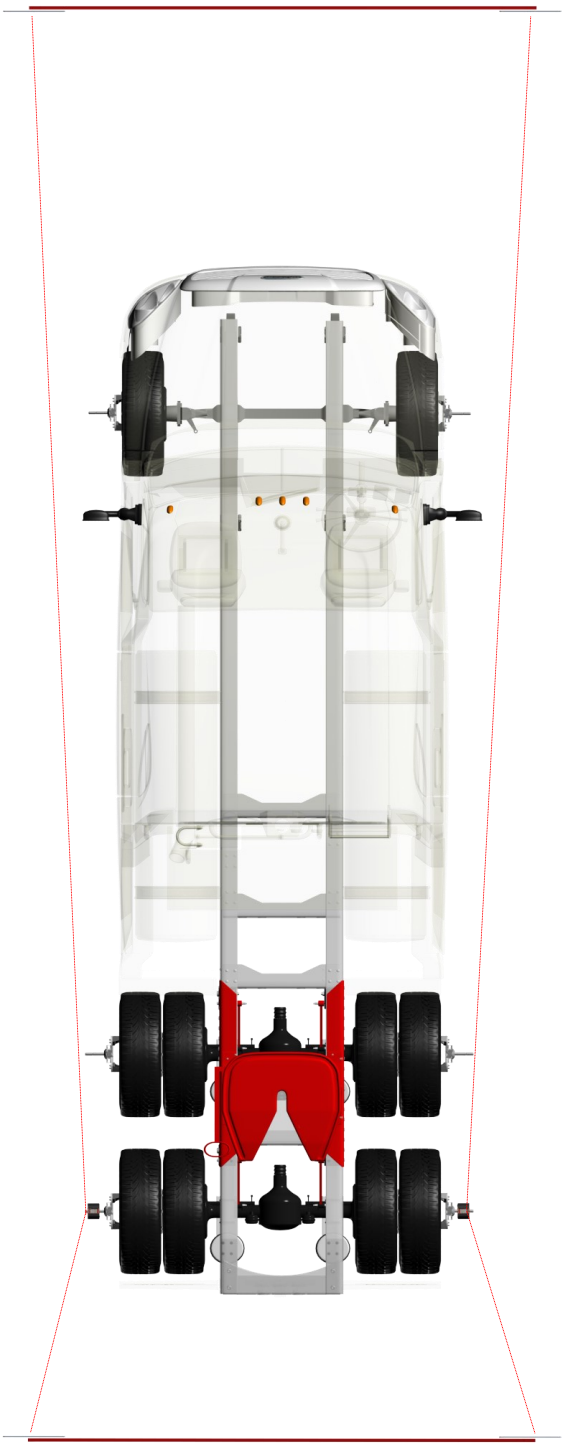
- Do not click on the RED X unless you are ready to RE-START from the beginning
- Do not click on the BLUE arrow at this time
- Do not click on the RED FRAME button at this time



CLICK HERE TO START COMPENSATION PROCEDURE

11.0 BEGIN | SELECTING THE VEHICLE

11.8 The vehicle coordinate box is now complete.
11.9 Proceed with compensation
11.10 The target scale perimeter box set up will not have to be done for every alignment



13.0 COMPENSATION

STARTING AT THE LEFT REAR | FIRST POINT COMPENSATION

13.1 With the POD mounted on the LEFT REAR axle wheel clamps, start with LEFT REAR POD and PRESS OK

13.1.1The GREEN lights will illuminate and flash then turn off, the measurement is done

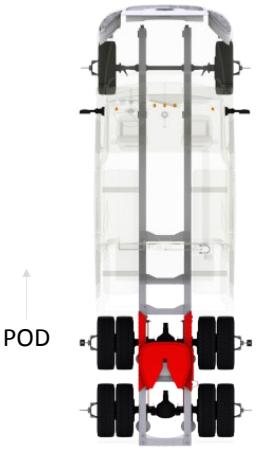
13.2 Shuttle the POD to the second LEFT REAR drive axle

13.2.1 Slide the POD on the shaft

13.2.2 Engage the POD in the groove on the shaft

13.2.3 PRESS OK

13.2.4 The GREEN lights will illuminate, flash then turn off, the measurement is done



13.3 Shuttle the POD to the LEFT FRONT axle

13.3.1 Slide the POD on the shaft

13.3.2 Engage the POD in the groove on the shaft

13.3.3 PRESS OK

13.2.4The GREEN lights will illuminate, flash then turn off, the measurement is done

13.0 COMPENSATION

CONTINUE WITH RIGHT REAR | FIRST POINT COMPENSATION

13.4 With the POD mounted on the RIGHT REAR axle wheel clamps, CONTINUE with RIGHT REAR POD and PRESS OK

13.4.1The GREEN lights will illuminate and flash then turn off, the measurement is done

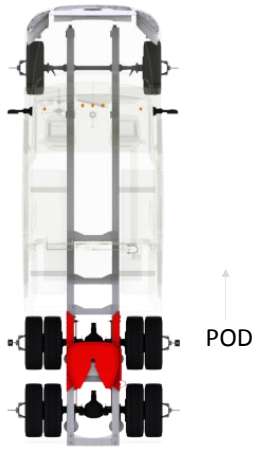
13.5 Shuttle the POD to the second RIGHT REAR drive axle

13.5.1 Slide the POD on the shaft

13.5.2 Engage the POD in the groove on the shaft

13.5.3 PRESS OK

13.5.4 The GREEN lights will illuminate, flash then turn off, the measurement is done



13.6 Shuttle the POD to the RIGHT FRONT axle

13.6.1 Slide the POD on the shaft

13.6.2 Engage the POD in the groove on the shaft

13.6.3 PRESS OK

13.6.4The GREEN lights will illuminate, flash then turn off, the measurement is done

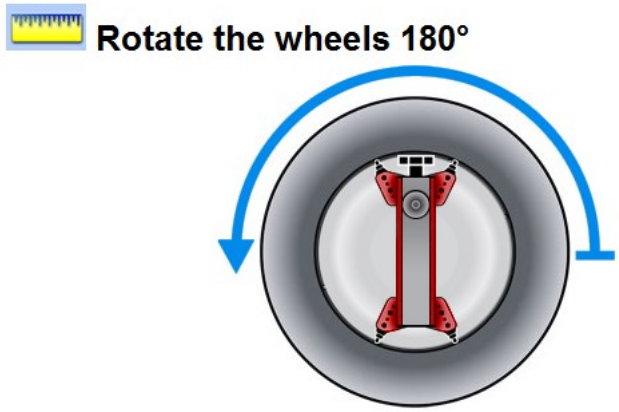
13.6.5 First point compensation completed

14.0 COMPENSATION | ROLL FORWARD

FOLLOW THE INSTRUCTIONS ON THE SCREEN

14.1 Start the vehicle
14.2 Air up the air brake system
14.3 Release the brakes

14.4 This icon means DRIVE FORWARD until the clamp has rotated 180degrees



14.5 Drive forward in the direction indicted by the large GREEN arrow

14.5.1 The numbers on the left indicate the distance left to roll forward

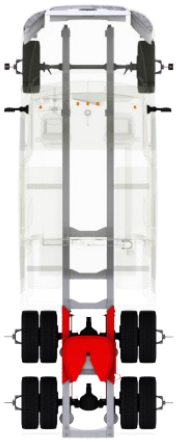
14.6 Stop when the STOP sign appears
14.7 Turn the vehicle OFF
14.8 Engage parking brake
14.9 Exit the vehicle
14.10 Click on OK on screen not the PODS

15.0 COMPENSATION | SECOND POINT

STARTING FROM THE RIGHT FRONT

15.1 With the PODS mounted on the FRONT axle wheel clamps, start with RIGH FRONT POD and PRESS OK

15.1.1The GREEN lights will illuminate and flash then turn off, the measurement is done



15.2 Shuttle the POD to the second (INBOARD) RIGHT REAR drive axle

15.2.1 Slide the POD on the shaft

15.2.2 Engage the POD in the groove on the shaft

15.2.3 PRESS OK

15.2.4 The GREEN lights will illuminate, flash then turn off, the measurement is done

15.2.5.PRESS OK

15.2.6 The GREEN lights will illuminate, flash then turn off, the measurement is

15.3 Shuttle the POD to the REARMOST DRIVE axle

15.3.1 Slide the POD on the shaft

15.3.2 Engage the POD in the groove on the shaft

15.3.3 Second point compensation completed

15.0 COMPENSATION | SECOND POINT

STARTING FROM THE LEFT FRONT

15.4 With the LEFT POD mounted on the LEFT FRONT axle wheel clamps, CO TINUE with LEFT FRONT POD and PRESS OK

15.4.1 The GREEN lights will illuminate and flash then turn off, the measurement is done

15.5 Shuttle the POD to the second (INBOARD) LEFT REAR drive axle

15.5.1 Slide the POD on the shaft

15.5.2 Engage the POD in the groove on the shaft

15.5.3 PRESS OK

15.5.4 The GREEN lights will illuminate, flash then turn off, the measurement is done

15.5.5 The GREEN lights will illuminate, flash then turn off, the measurement is

15.6 Shuttle the POD to the REARMOST LEFT REAR drive axle

15.6.1 Slide the POD on the shaft

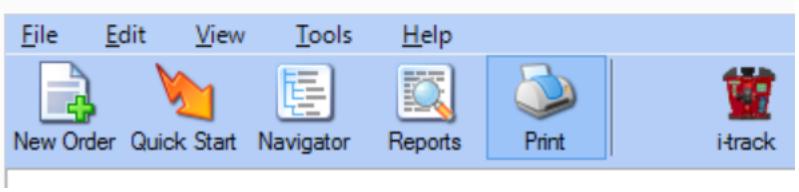
15.6.2 Engage the POD in the groove on the shaft

15.6.3 PRESS OK

16.0 VIEW MEASUREMENTS

ACCESS REPORTS

16.1 On the upper tool bar, click on REPORTS



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	LTruck8x2

All values are in mm/m if not differently stated. Values in parenthesis are before measurements

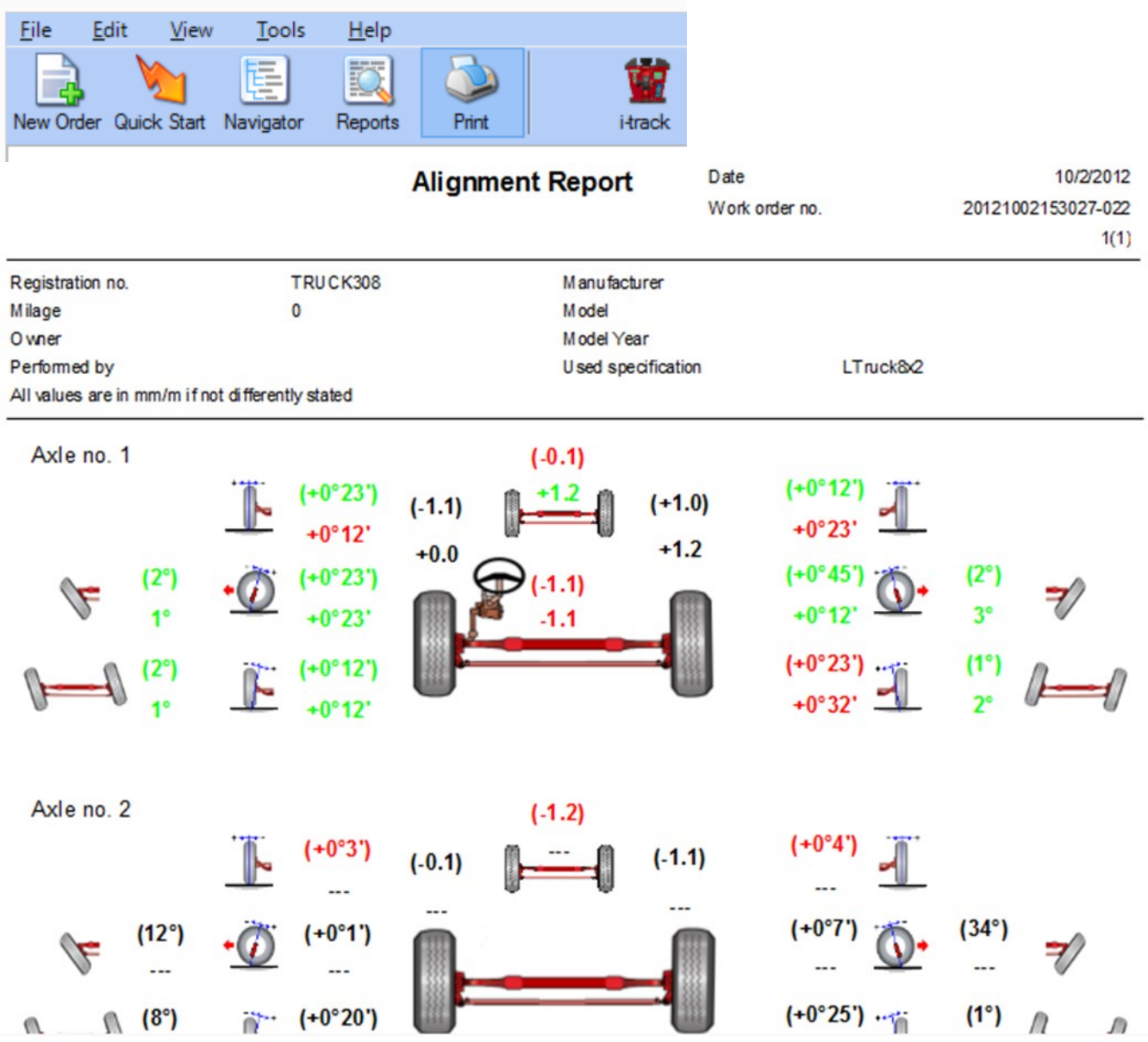
Axle no. 1	Min	Left side	Max	Min	CenterPoint	Max	Min	Right side	Max
Toe	---	(-1.1) +0.0	---	+3.0	(-1.1) -1.1	+4.0	---	(+1.0) +1.2	---
Camber	+0°20'	(+0°23') +0°12'	+0°30'		Total toe		+4°0'	(+0°12') +0°23'	+6°0'
Caster	+0°12'	(+0°23') +0°23'	+0°23'	+1.0	(-0.1) +1.2	+3.0	+1°2'	(+0°45') +0°12'	+1°4'
KPI	+0°12'	(+0°12') +0°12'	+0°23'				+10°0'	(+0°23') +0°32'	+20°0'
Max turn	1°	(2°) 1°	3°				2°	(2°) 3°	5°
Toe out on turn	1°	(2°) 1°	3°				1°	(1°) 2°	3°

Axle no. 2	Min	Left side	Max	Min		Max	Min	Right side	Max

17.0 VIEW MEASUREMENTS

ACCESS REPORTS

17.1 On the upper tool bar, click on REPORTS

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