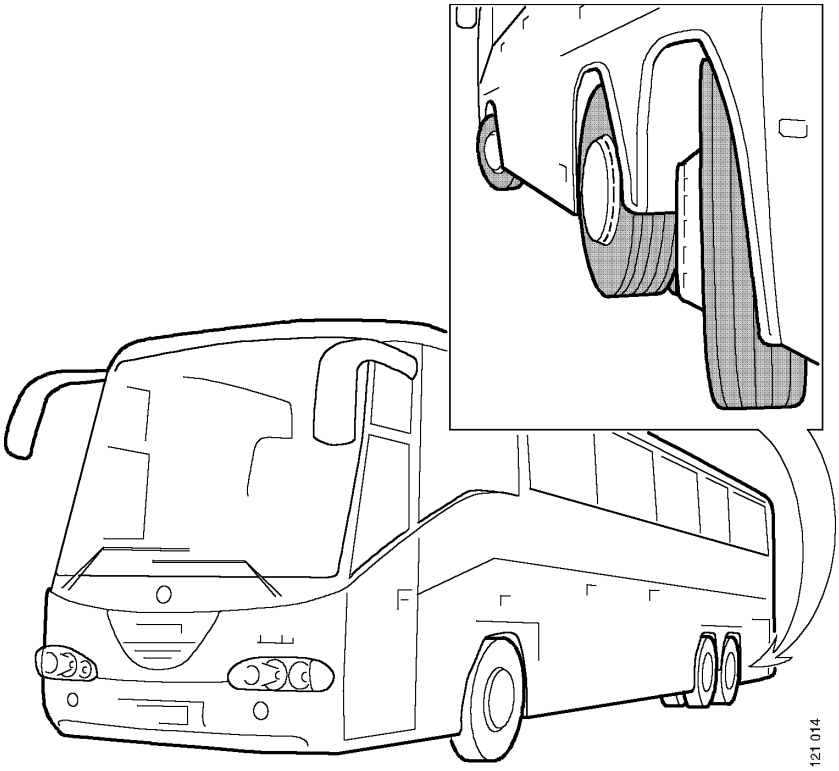
SCANIA

13:01-52

Issue 2 **en**

ARA860, steered tag axle

Adjusting wheel angles and rolling direction



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Preparation

The hydraulic system controlling the ARA860 must be full, bled and pressurised. In case of problems with tyre wear and rocking motion, check hydraulic system pressure and integrity. See Workshop Manual, main group 13, Work description, Steered tag axle behind the driving axle.

To calculate the deviation in rolling direction for the tag axle, toe-in or toe-out values of both the front axle and the tag axle must be measured and adjusted. Adjust the front axle toe-in or toe-out, see Workshop Manual, main group 13, Adjusting wheel angles.

1 Place turning discs under all steered wheels.

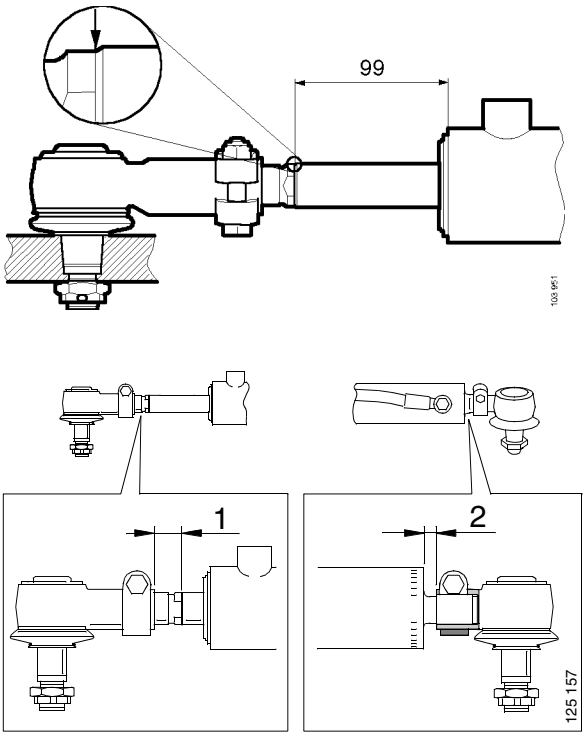
2 Place laser measuring equipment on the front axle and the tag axle. See Workshop Manual, main group 13, Suspension of measuring scales, Work description and Adjusting wheel angles, function and work description.

Rolling direction

Master cylinder

1 Turn the front axle to point straight ahead.

2 If necessary, check and adjust the master cylinder hydraulic centre position according to the control measurement 99 mm. Adjust by releasing the ball joint clamp and turning the piston rod. Tighten the clamp and check that the front axle is pointing straight ahead.



Master cylinder

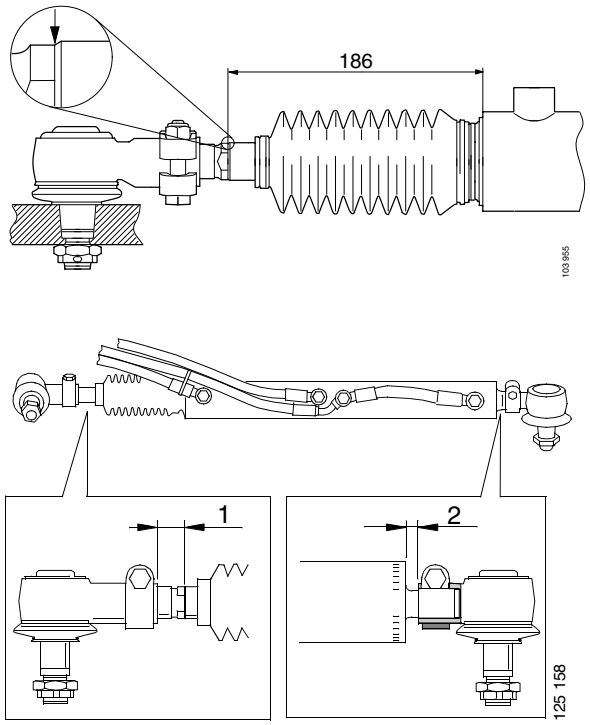
1 Max. 31.5 mm

2 Max. 14 mm

Centering cylinder

1 With fault-free centering cylinder and pressurised system, the check dimension for the centering cylinder hydraulic centre position should be 186 mm.

Check for leaks in the centering cylinder if the hydraulic centre position deviates from the check dimension. See Workshop Manual, main group 13, Steered tag axle behind the driving axle, Function and Work description.



Centering cylinder

1 Max. 31.5 mm

2 Max. 19 mm

2 Adjust the tag axle rolling direction by releasing the ball joint clamp and turning the piston rod.

Maximum rolling direction deviation is 2 mm/m.

Wheel alignment

Adjusting toe-in on tag axle

1 Measure the alignment of all the wheels. Check that camber and caster are within tolerances. These must be correct for the toe-in value to be valid.

2 Refer to the diagram and adjust toe-in.

Newer axles have different camber on the right and left wheels. This is to prevent uneven wear on the tyres due to the camber of the road. These newer axles have full lock stops front and back on the axle. The same axle will therefore suit both LHD and RHD vehicles.

Test values

	Min.	Nom	Max.
Camber 1	0.0 degrees	0.4 degrees	0.8 degrees
Camber 2	-0.5 degrees	-0.1 degrees	0.3 degrees
Caster	1.5 degrees	2.0 degrees	2.5 degrees

The difference in caster between right and left-hand sides must not exceed 0.5 degrees.

Camber 1 and camber 2 depend on the axle version.

- The following applies to older axles up to and including chassis numbers 1841195:

  Camber is **equal** on both sides. Use camber 1 on both sides.

- The following applies to newer axles from and including chassis numbers 1841196:

  Camber is **different** on each side of the vehicle. Use camber 1 on the side with the power steering gear. Use camber 2 on the side without the power steering gear.

Deviations in chassis number boundaries may occur.

KPI for camber 1 = 5.25 +/- 0.25 degrees.

KPI for camber 2 = 5.75 +/- 0.25 degrees.

The diagram shows how toe-in can vary with different axle loads on this axle. Use the diagram to set the toe-in for the current vehicle load.

Permitted values are in the grey area.

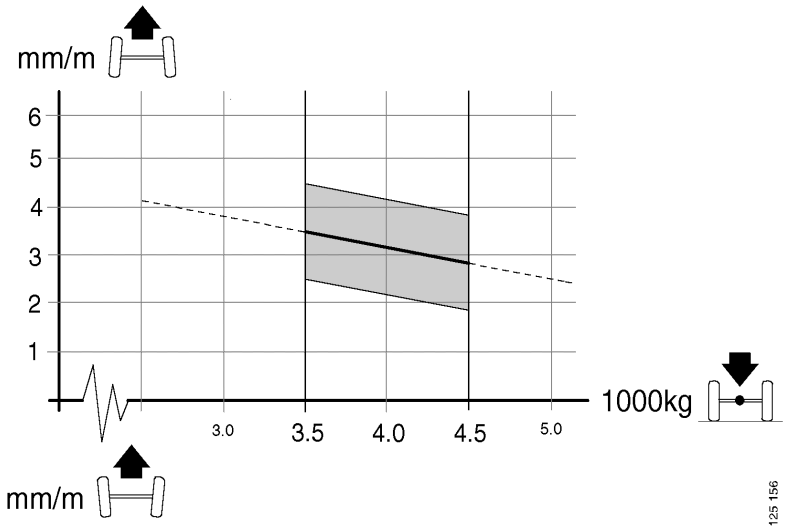
Note: This axle moves towards toe-out when laden. The track rod is located in front of the axle member.

1 Estimate the load on the axle.

2 Look at the diagram to see which toe-in or toe-out applies for the estimated load. Adjust to the applicable values.

3 After setting the track rod, distribute the total toe-in or toe-out value equally between right and left-hand sides. The toe-in or toe-out value is distributed by turning the centering cylinder piston rod.

Make sure the check dimension for the centering cylinder hydraulic centre position is correct.



The diagram shows the toe-in to be set depending on the vehicle load on the axle. The diagram shows only the area for the vehicle's normal kerb weight.