

Self Steering Axles Installation & Maintenance

For Your Trailer Axle Suspension Needs Call York :

Head Office

Singapore

York Transport Equipment (Asia) Pte. Ltd.
No. 5 Tuas Avenue 6, Singapore 639295
Email : enquiry@yorkpt.com.sg
Tel : (65) 6861 0577 Fax : (65) 6861 4045

Overview of Self Steering Axle

i. How to identify a Self Steering Axle

The following pages tell the user how to identify the self-steering axle manufactured by York Transport Equipment (Asia) Pte. Ltd. This is very important in order to make it possible, with the passage of time, for the manufacturer to quickly and correctly furnish the technical information and support required for whatever need.

We highly recommend never removing or modifying information necessary for identifying the product.

Identification of Self-Steering Axle

The actual physical identification element is the stamped and silk-screened identification plate that gives all the information required by the York Transport Equipment (Asia) Pte. Ltd. Company. This plate is the only plate recognized by the manufacturer as a means for identifying the product.

Location of Identification Plate

The position of the identification plate is indicated in figure 2.

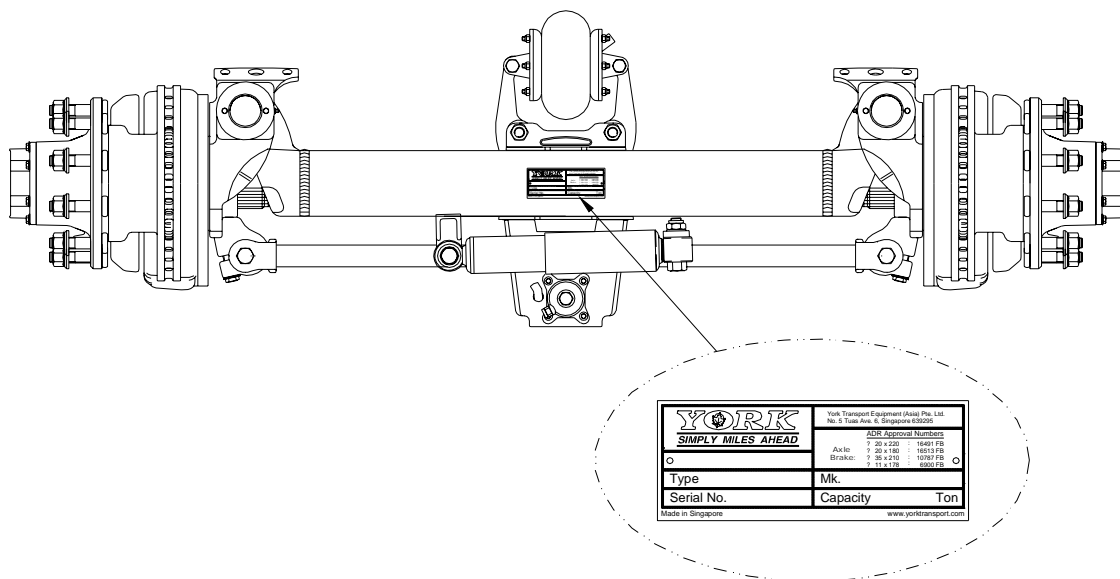


Figure 2 - Position of the identification plate

ii. Product Use and Purpose

The self-steering axle is a product conceived and manufactured for multiple-axle vehicles where the side scrub, during on-road travel or when making turns, translates into sudden tire deterioration or greater tire wear. In general this also means greater turning difficulties and greater “steering stiffness”.

The self-steering axle is a fundamental part of your vehicle which will be difficult for you to do without in the future. Self-steering axles, in particular, have the following advantages:

- * Increase the load-bearing capacity of the vehicle by acting as additional axles.
- * Reduce tire wear.
- * Prevent scrubbing of tires during steering maneuvers.
- * Protect road surfaces.
- * Make it easier to drive the vehicle.
- * Make steering more sensitive.
- * Reduce the space required for manoeuvring the vehicle.
- * Eliminates fuel waste

Installation of Self-Steering Axle

Assembly procedures can create danger situations for exposed persons. It is **ABSOLUTELY NECESSARY** to keep to the recommendations of York Transport Equipment (Asia) Pte. Ltd. given in this manual, and use properly inspected and suitable equipment and tools.

Installation personnel must be trained and authorized to use tools and test equipment.

Self-steering axles must be installed correctly, deviation from established dimensions can compromise the self-steering effect. The axle, in its “at-rest” position, must take the position shown in figure 3.

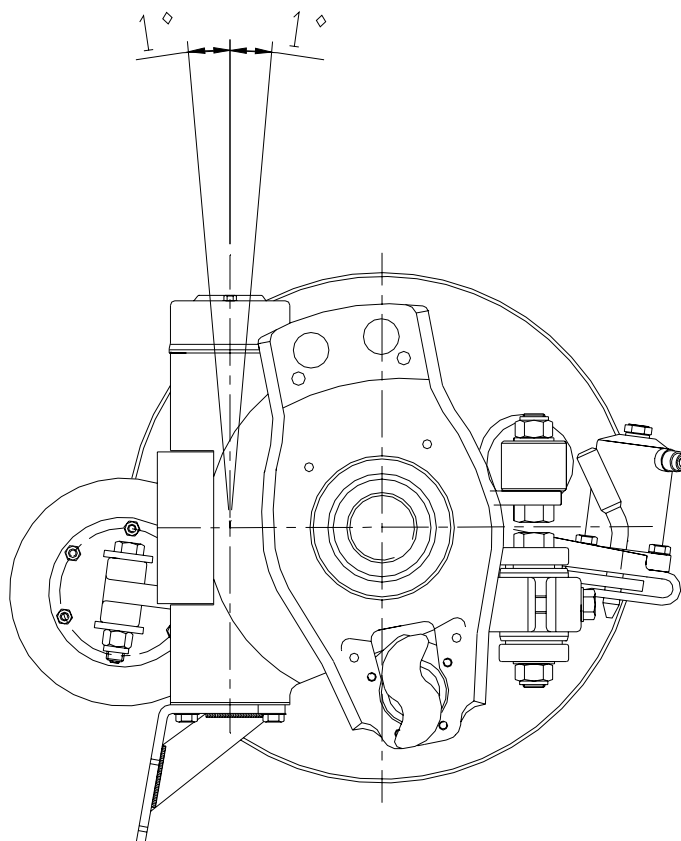


Figure 3 - Inclination of the stub axle pin

NOTE

Inclination tolerance $\pm 1^\circ$ from the vertical position.

Welding of Spring Seats

It is important to check the working position of the air suspension or mechanical suspension in order to weld the spring seats at the correct angle, with the stub axle pin vertical in figure 4.

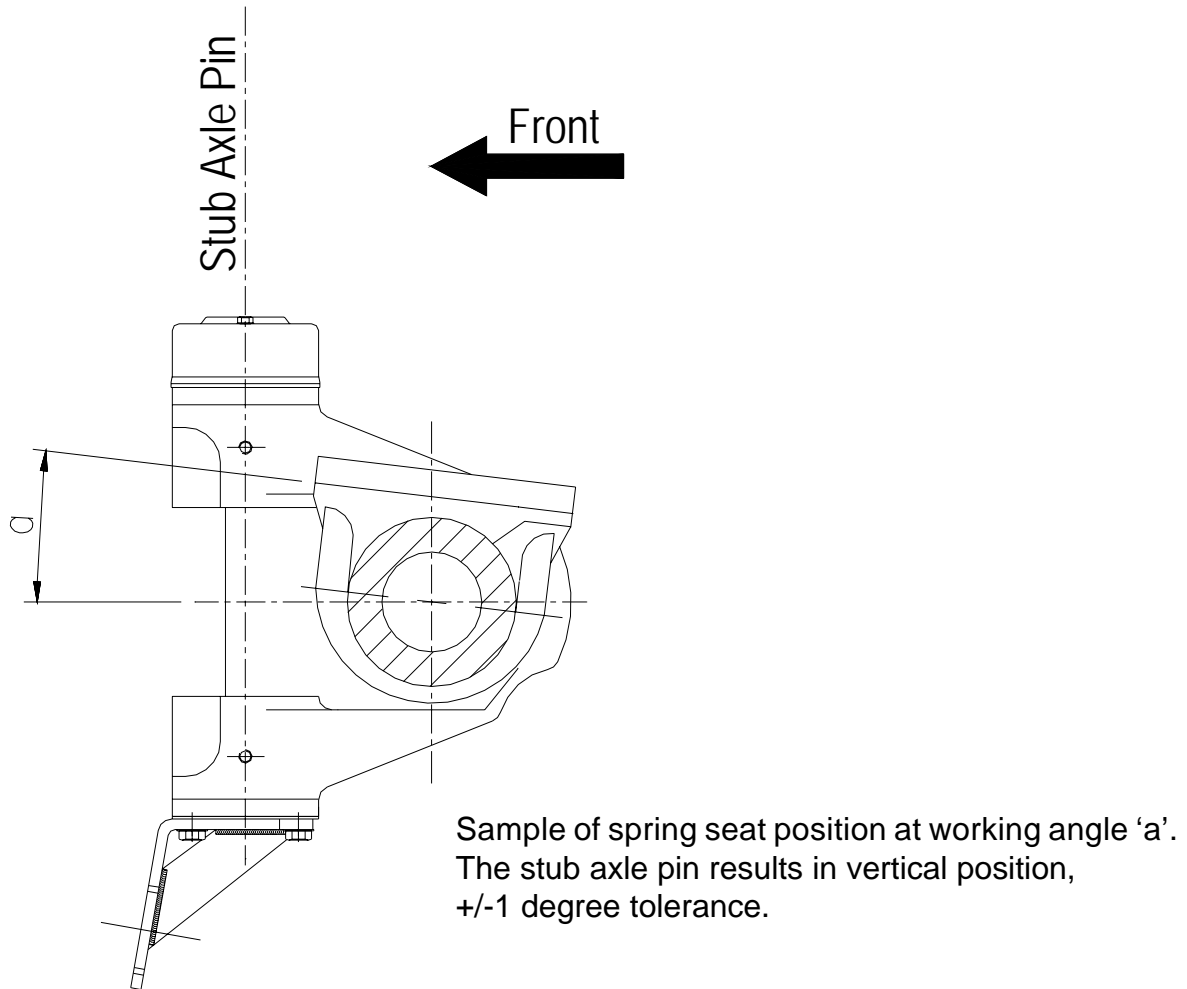
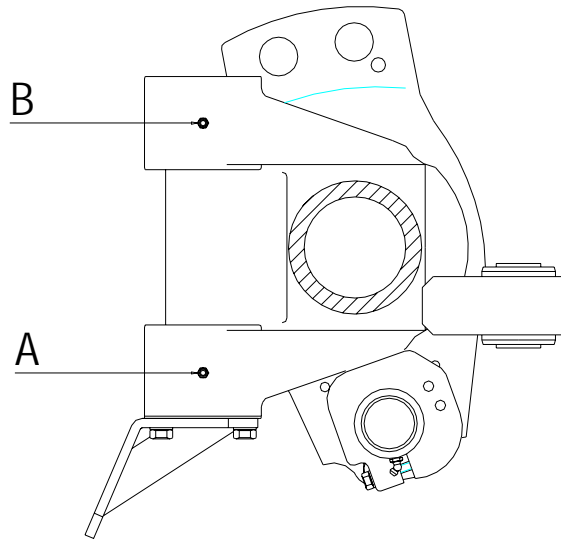


Figure 4

The spring seat must be welded correctly so that the axle can function properly and will not damage any component.

Lubrication

Refer to the figure below for lubrication.



Periodic Maintenance

The periodic maintenance schedule below refers to standard operating conditions. The schedule may need to be changed case by case depending on the intensity of use. The fleet maintenance manager, driver or owner must always comply with the manufacturer's instructions and warnings.

PREVENTIVE MAINTENANCE SCHEDULE							
Para-graph	Type of Intervention	km traveled/period					
		Start up	From 500 to 1,500	Every 5,000 km or Every 2 Months	Every 25,000 km or Every 4 Months	Every 50,000 km or Every 6 Months	Every 100,000 km or Every 12 Months
2.5	Tighten nuts and bolts		☐			☐	
2.3	Lubrication				☐		
2.2.1	Check toe-in		☐		☐		☐
1.4	Check geometric layout					☐	☐
2.2.2	Check pin wear						☐
	Check tyre wear			☐			

WARNING

The tightness of wheel nuts must be checked every day during the first week of work.

Tightening torques

i. Axle Beam

<i>Description</i>	<i>Tightening torque</i>
	<i>Nm</i>
Fastening screws for dust cover	9 - 10
Adjustment ring nut screws, lock cylinder	37 - 40
Knuckle arm screws	178 - 196
Screws fastening the sleeve - arm and forks on the tierod	73 - 80
Shock absorber and fastening nuts of forks on the spring bush pin	350 - 370
Correction fulcrum pin fastening nuts	85 - 90
Air cushion support fastening nuts	25 - 27
BC bracket screws	40 - 44

ii. Wheel End

<i>Description</i>	<i>Tightening torque</i>
	<i>Nm</i>
Hubcap bolts (grease)	16 - 30
Hubcap bolts (oil) – optional	25 - 30
Dust cover bolts	16 - 30
Spherical support bolts (cam side)	38 - 45
Spherical support bolts (spline side)	40 - 55
Probe fastening ABS sensor bolts	8 - 11
Axle end lock nut	340 – 400
Wheel nut ISO M22x1.5 (for steel and alloy wheels)	760 - 850