

Eliminating Symptoms on Chassis: Enhanced Suspension Alignment Required (Steering wheel is out of line, alignment not possible/SY3816)

General information

Vehicle Type: **Cayman GT4**

Model Year: **2016**

Subject: **Wheel alignment to setpoint values not possible on rear axle.**

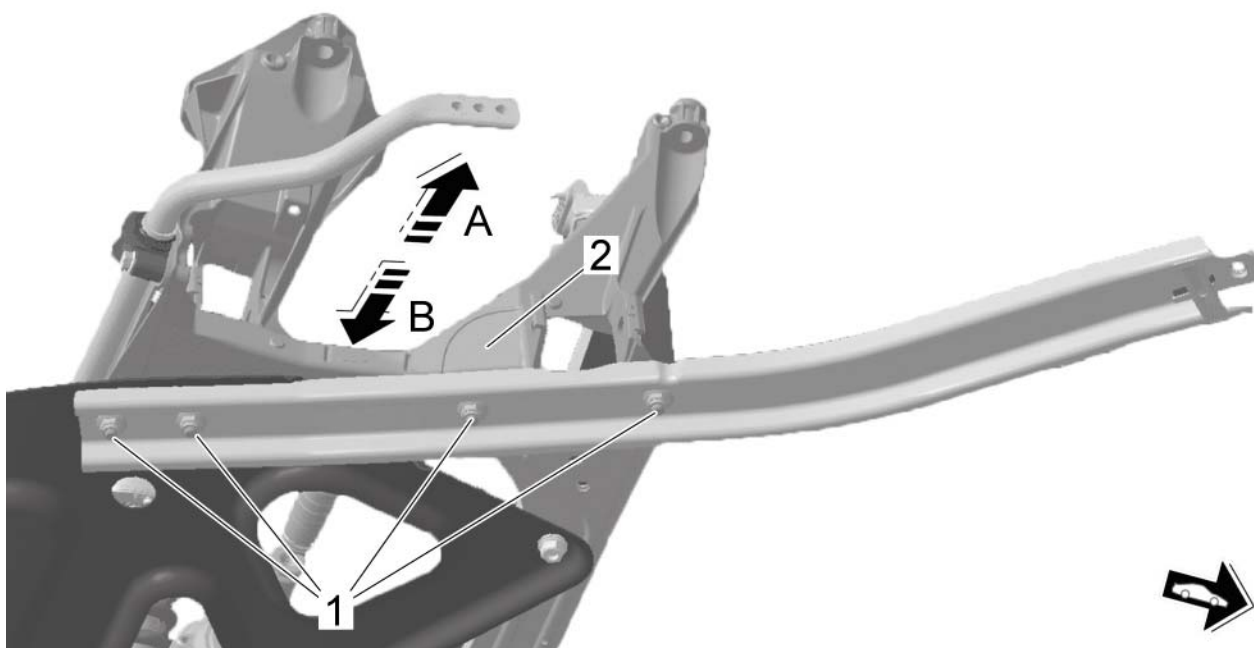
Information: **Vehicle pulls to the left or right, steering wheel is out of line, significant wear on inside tires.**

Remedial Action: Check and adjust the axle if necessary.

If the toe and camber values on the rear axle do not need to be adjusted, threaded joints ⇒ *Overview-1-* on the affected side of the vehicle must be loosened and

- the axle side section ⇒ *Overview-2-* must be moved, or if this is not sufficient
- the axle side section ⇒ *Overview-2-* must be turned.

This will change the toe or camber and the value will be in the setpoint range following fine adjustment.



Overview

- Work Procedure: 1 Measure the vehicle height and make adjustments if necessary in accordance with the **Service alignment card 981.002.330.81 AS02**.



Information

The vehicle height must be measured at chassis measuring point \Rightarrow *Chassis measuring point -arrow-* by measuring the height straight down to the **road contact surface**.

- 2 Perform suspension alignment.

Adjustment values for suspension alignment. \Rightarrow *Workshop Manual '4X00IN Adjustment values for suspension alignment'*

Suspension alignment, complete. \Rightarrow *Workshop Manual '449503 Suspension alignment, complete'*

- 3 If the toe and camber values cannot be adjusted to setpoint values, the axle side sections must be **moved**.

- 3.1 Loosen camber eccentric adjuster **-1-** and toe eccentric adjuster **-2-**.



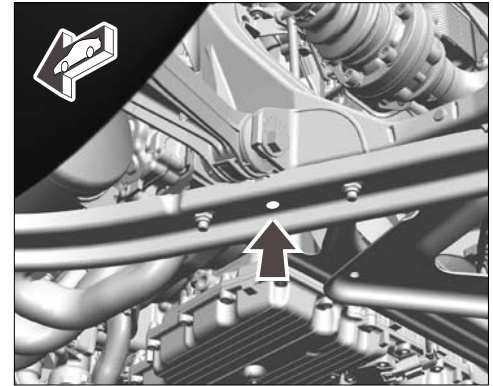
Information

Do not loosen the threaded joint on the body side; it will be moved/turned by the elasticity of the axle side section.

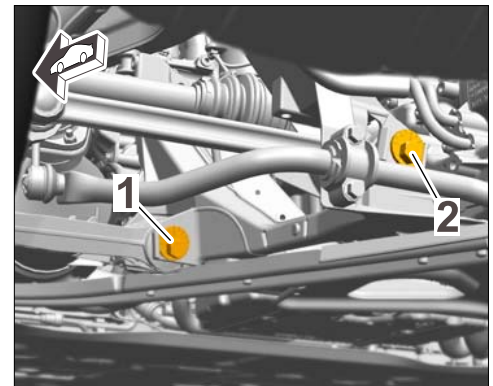
Loosening the left axle side section on the body side would be possible as a last resort because it has slots.

Loosening the right axle side section on the body side would not be necessary even as a last resort because it has no slots.

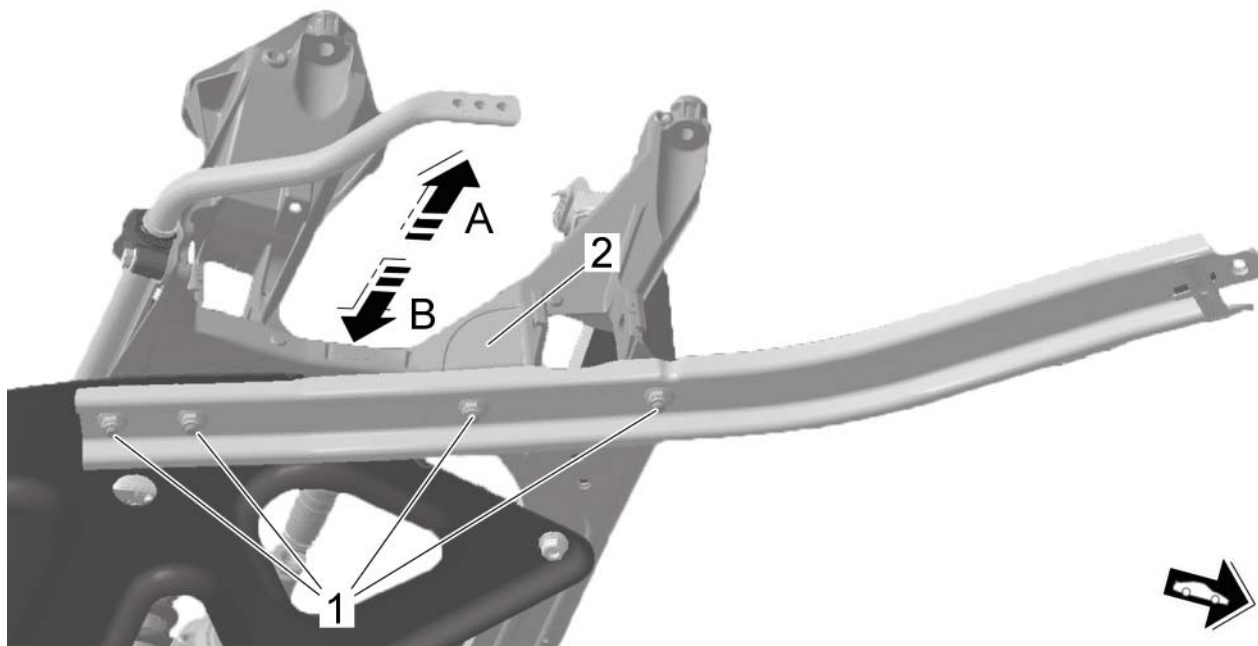
- 3.2 If setpoint values are not reached, loosen threaded joints \Rightarrow *Moving axle side sections -1-*, pull lower part of axle side section \Rightarrow *Moving axle side sections -2-* outwards \Rightarrow *Moving axle side sections -arrow A-* and tighten threaded joints again to **Tightening torque 65 Nm (48 ftlb.)** .
- 3.3 If setpoint values are exceeded, loosen threaded joints \Rightarrow *Moving axle side sections -1-*, press lower part of axle side section \Rightarrow *Moving axle side sections -2-* inwards \Rightarrow *Moving axle side sections -arrow B-* and tighten threaded joints again to **Tightening torque 65 Nm (48 ftlb.)** .



Chassis measuring point



Camber and toe eccentric adjuster



Moving axle side sections

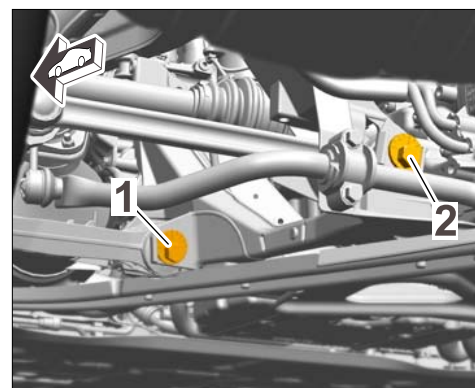
- 3.4 Tighten camber eccentric adjuster ⇒ *Camber and toe eccentric adjuster -1-* and toe eccentric adjuster ⇒ *Camber and toe eccentric adjuster -2-*.



Information

Following suspension alignment and adjustment work, tighten the camber and toe eccentric adjusters to **110 Nm (81.5 ftlb.)**.

- 4 If the toe and camber values still cannot be adjusted to setpoint values, the axle side sections must be **turned**.



Camber and toe eccentric adjuster

- 4.1 Loosen camber eccentric adjuster \Rightarrow *Camber and toe eccentric adjuster -1-* and toe eccentric adjuster \Rightarrow *Camber and toe eccentric adjuster -2-*.

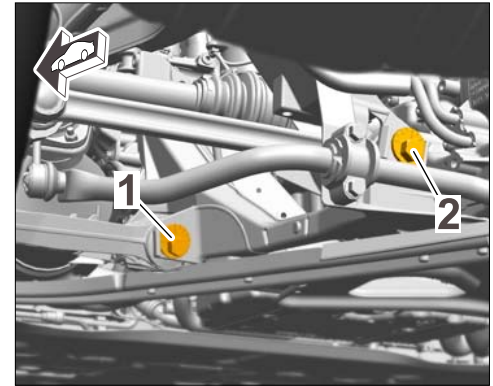


Information

Do not loosen the threaded joint on the body side; it will be moved/turned by the elasticity of the axle side section.

Loosening the left axle side section on the body side would be possible as a last resort because it has slots.

Loosening the right axle side section on the body side would not be necessary even as a last resort because it has no slots.



Camber and toe eccentric adjuster

- 4.2 If **camber values** cannot be adjusted, loosen threaded joints \Rightarrow *Turning axle side sections -1-*, turn axle side section \Rightarrow *Turning axle side sections -2-* on the wishbone side inwards or outwards \Rightarrow *Turning axle side sections -arrow A-* and tighten threaded joints again to **Tightening torque 65 Nm (48 ftlb.)** .



Information

Turning the axle side section on the wishbone side inwards will reduce the camber.

Turning the axle side section on the wishbone side outwards will increase the camber.

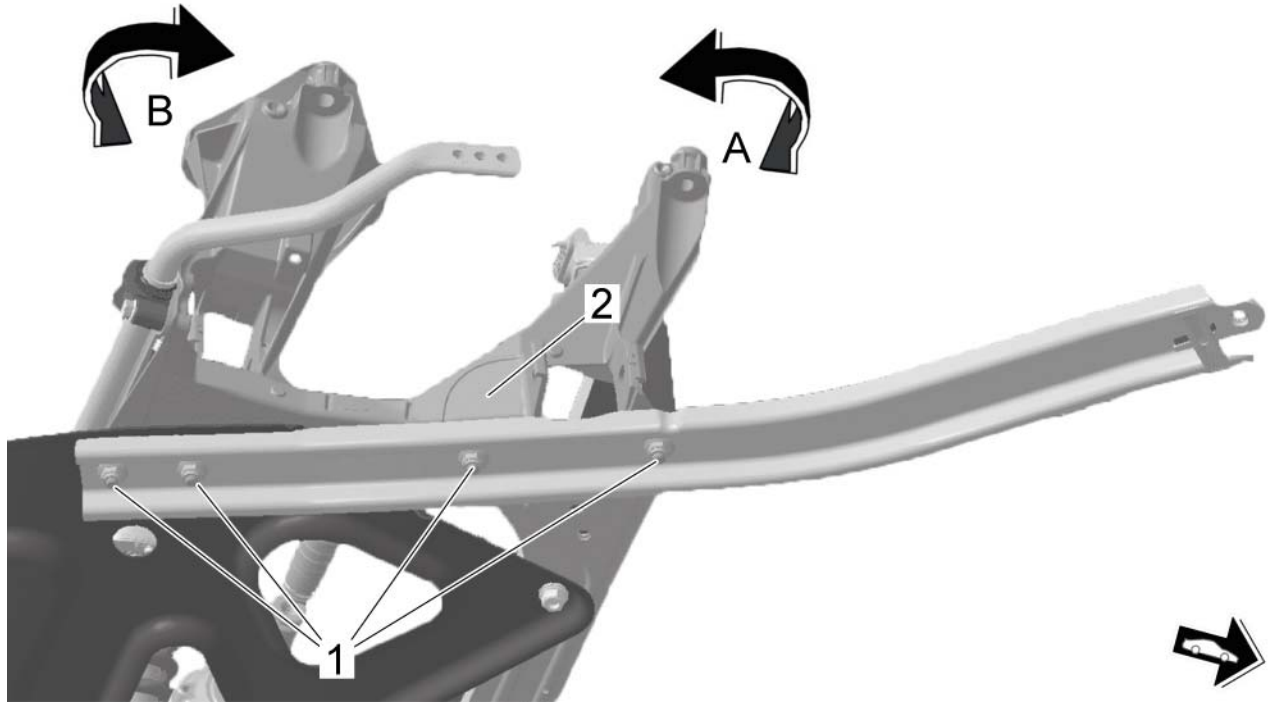
- 4.3 If **toe values** cannot be adjusted, loosen threaded joints \Rightarrow *Turning axle side sections -1-*, turn axle side section \Rightarrow *Turning axle side sections -2-* on the tie rod side inwards or outwards \Rightarrow *Turning axle side sections -arrow B-* and tighten threaded joints again to **Tightening torque 65 Nm (48 ftlb.)** .



Information

Turning the axle side section on the tie rod side inwards will result in a more positive toe (toe-in).

Turning the axle side section on the tie rod side outwards will result in a more negative toe (toe-out).



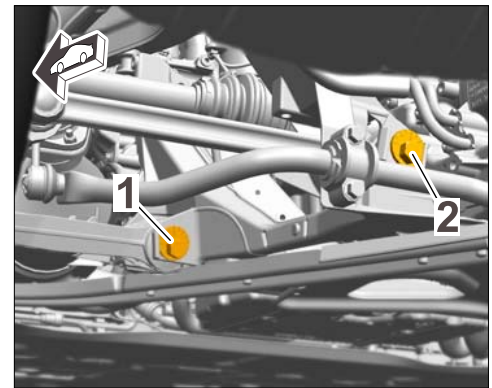
Turning axle side sections

- 4.4 Tighten camber eccentric adjuster ⇒ *Camber and toe eccentric adjuster -1-* and toe eccentric adjuster ⇒ *Camber and toe eccentric adjuster -2-*.



Information

Following suspension alignment and adjustment work, tighten the camber and toe eccentric adjusters to **110 Nm (81.5 ftlb.)**.



Camber and toe eccentric adjuster

Invoicing: The work involved is invoiced under the labor operation:

APOS	Labour operation	I No.
44951550	Adjusting vehicle at front + rear	
42381650	Adjusting rear-axle carrier side sections	
42381552	Adjusting rear-axle carrier side sections	

APOS	Labour operation	I No.
44950300	Performing front + rear suspension alignment	
42381551	Adjusting rear-axle carrier side sections	

For invoicing and documentation using PQIS, enter the following coding:

Location (FES5)	42010	Rear axle
Damage type (SA4)	1111	Incorrect adjustment

References: Adjustment values for suspension alignment. ⇒ *Workshop Manual '4X00IN Adjustment values for suspension alignment'*

Suspension alignment, complete. ⇒ *Workshop Manual '449503 Suspension alignment, complete'*

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