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.**

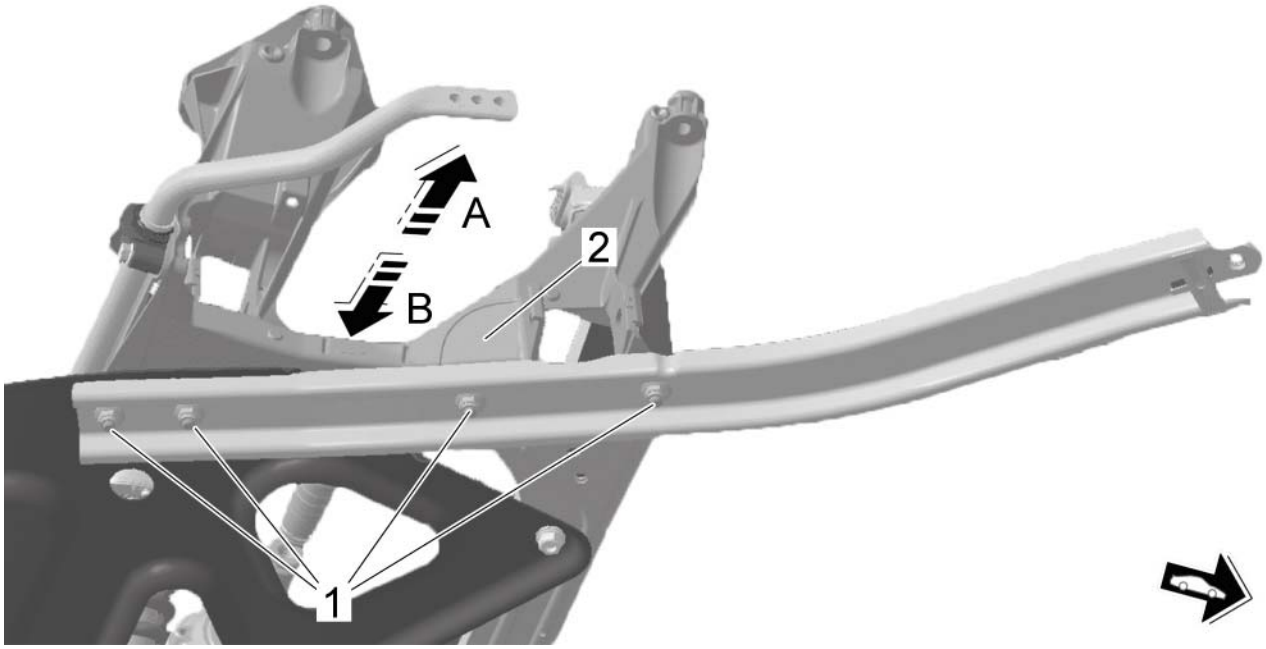
Information: **Vehicle pulls to the left or right, steering wheel is out of line, significant wear on inside tires.**

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.

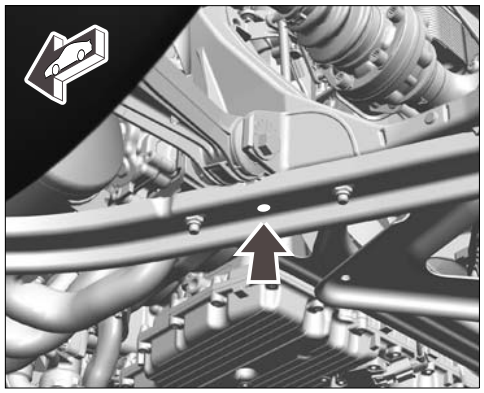


Overview

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 ⇒*Chassis measuring point* **-arrow-** by measuring the height straight down to the **road contact surface**.



Chassis measuring point

2 Perform suspension alignment.

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

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

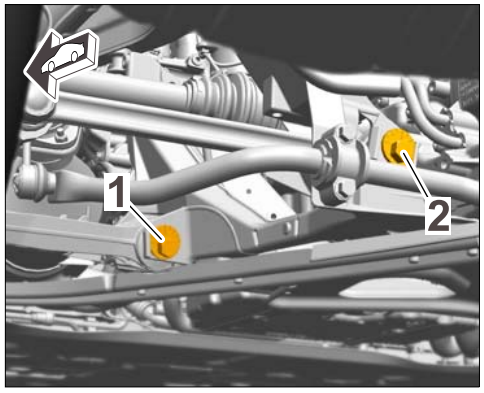
3 If the toe and camber values cannot be adjusted to setpoint values, the axle side sections must be **moved**.

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.

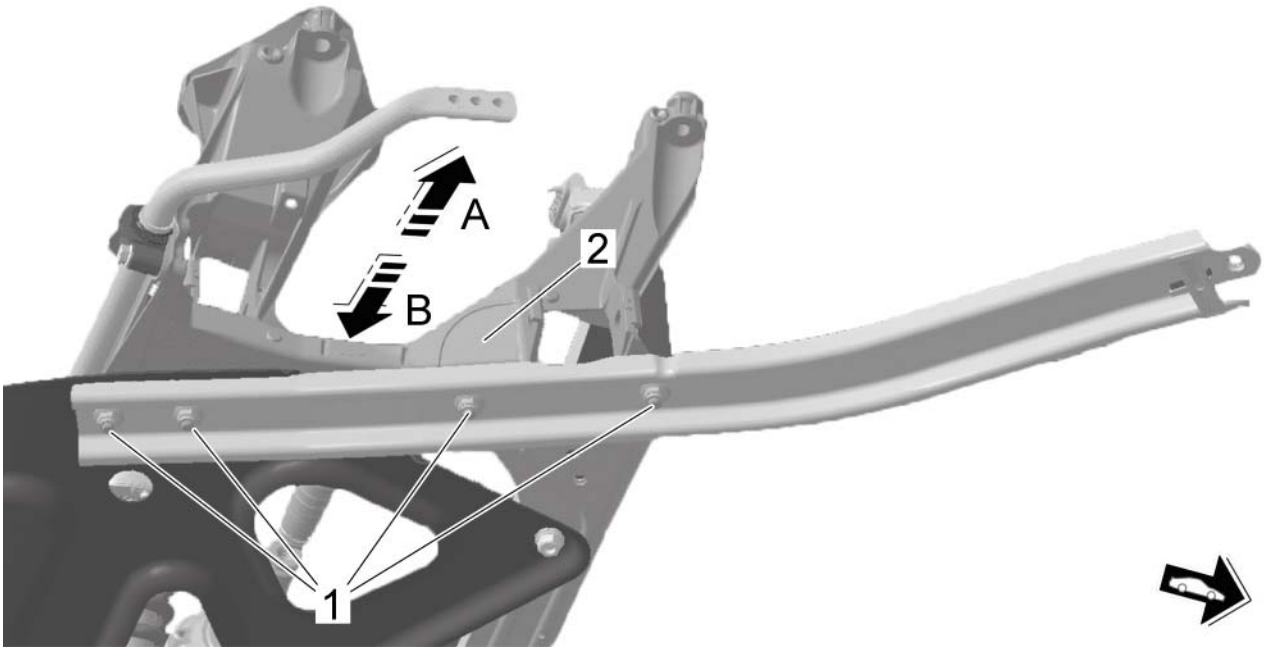


Camber and toe eccentric adjuster

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 ⇒*Moving axle side sections* **-1-**, pull lower part of axle side section ⇒*Moving axle side sections* **-2-** outwards ⇒*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 ⇒*Moving axle side sections* **-1-**, press lower part of axle side section ⇒*Moving axle side sections* **-2-** inwards ⇒*Moving axle side sections* **-arrow B-** and tighten threaded joints again to **Tightening torque 65 Nm (48 ftlb.)** .

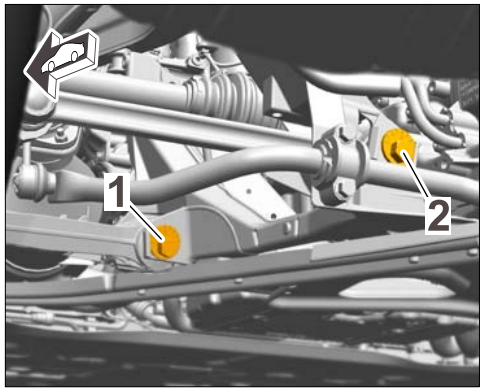


Moving axle side sections

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.)**.



Camber and toe eccentric adjuster

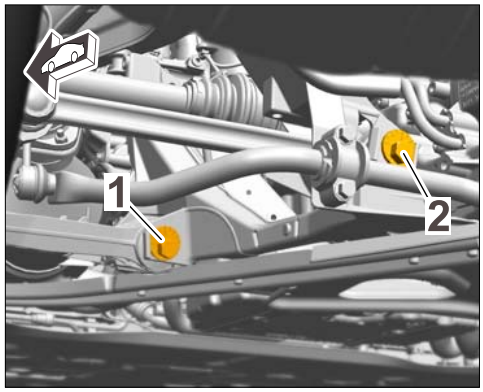
4 If the toe and camber values still cannot be adjusted to setpoint values, the axle side sections must be **turned**.

4.1 Loosen camber eccentric adjuster ⇒ *Camber and toe eccentric adjuster* **-1-** and toe eccentric adjuster ⇒ *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.



Camber and toe eccentric adjuster

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

4.2 If **camber values** cannot be adjusted, loosen threaded joints ⇒ *Turning axle side sections* **-1-**, turn axle side section ⇒ *Turning axle side sections* **-2-** on the wishbone side inwards or outwards ⇒ *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.

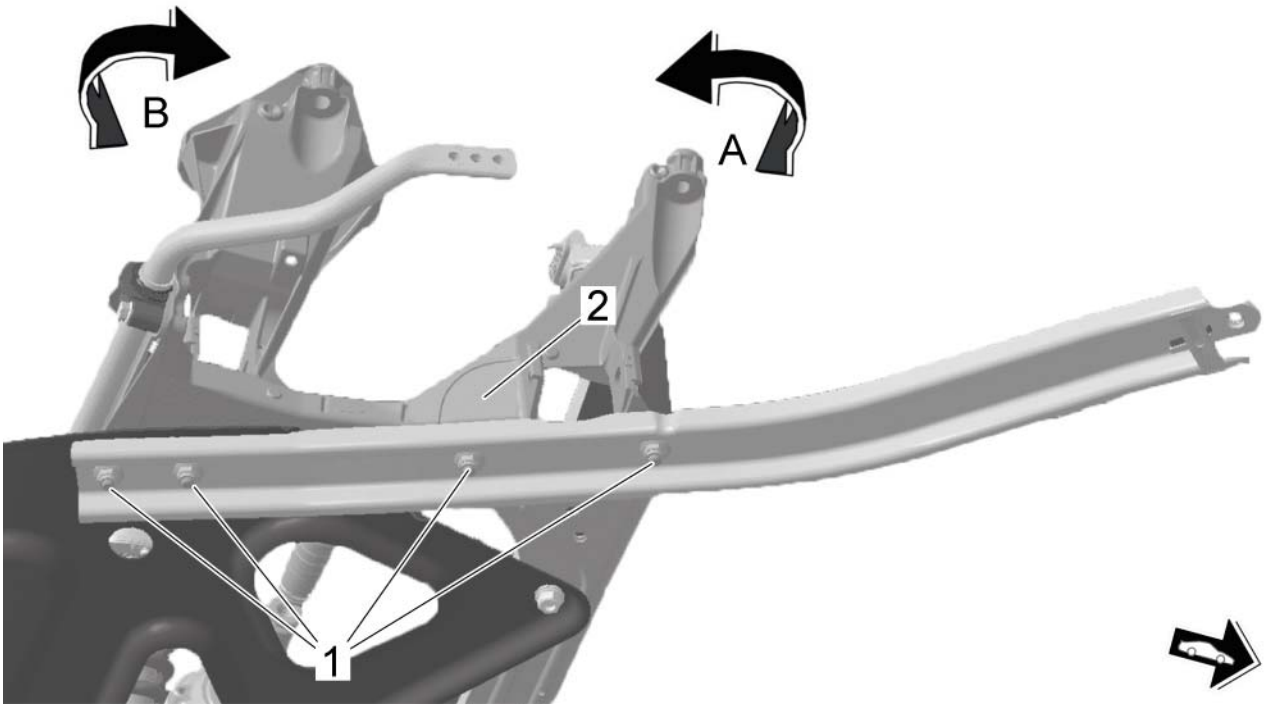
Turning the axle side section on the wishbone side outwards will increase the camber.

4.3 If **toe values** cannot be adjusted, loosen threaded joints ⇒ *Turning axle side sections* **-1-**, turn axle side section ⇒ *Turning axle side sections* **-2-** on the tie rod side inwards or outwards ⇒ *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).

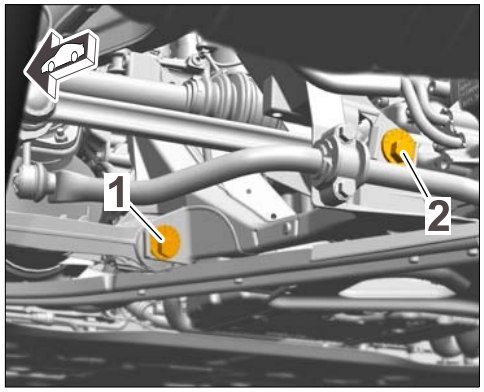


Turning axle side sections

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'*

Dealership Distribution Routing	Service Manager	_____	Shop Foreman	_____	Service Technician	_____	_____	_____	_____
	Asst. Manager	_____	Warranty Admin.	_____	Service Technician	_____	_____	_____	_____