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## Vehicle pulls to the right

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Topic number	LI46.25-P-059240
Version	2
Design group	46.25 Hydraulic/electrohydraulic steering
Date	07-10-2014
Validity	463.### -1X as of XZ2 (YoM12)
Reason for change	Remedy, parts and attachment adapted
Reason for block	

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### Complaint:

Vehicle runs off to the right on flat roads when driving straight ahead.

### Cause:

Various causes are possible. Please perform a cause analysis as described in the remedy.

### Remedy:

Proceed step by step if the problem continues to occur:

1. Restore vehicle to series production configuration

e.g. remove any wheel spacers, check tire pressures, check tire sizes and running direction etc.

2. Check wheel alignment and adjust if necessary

For this, always use universal adapters for the measuring heads; the Mercedes-Benz measuring head holders are not suitable for the G-Class.

Rim runout compensation must be performed in all cases.

3. Check steering gear

Detach drag link from steering gear.

Then measure the force required to move the pitman arm to the left and right (with the engine running!).

A commercially available spring balance, spring force meter, luggage scale or similar must be used for this, the scale should extend from 0 to 400 N (0 to 40 kg).

The force must be measured at right angles to the pitman arm and at the same height.

Difference between left and right:

The greater force must be no more than 50% higher than the lower force.

Example:

Force for moving the pitman arm to the left: 300 N (30 kg)

Force for moving the pitman arm to the right: 200 N (20 kg)

The steering gear must be replaced.

Replace steering gear if this is necessary according to the test (step 3):

1. Replace steering gear including pitman arm (included in package).

The identification plate of the steering gear must bear a production date of at least 02/2014 and a production number of at least 1545.

Always note: The marking on the steering shaft of the steering gear is not valid. The steering gear and steering wheel must be in the straightahead position when installing.

- Install steering gear on frame and connect hydraulic connections
- Connect drag link to pitman arm
- Straighten right front wheel
- Straighten steering wheel
- Connect steering shaft to steering gear (the steering wheel and right front wheel must be straight!)

2. Bleed steering gear (after filling with power steering fluid):

Start engine and switch off again.

Raise vehicle at the front (load off front wheels) and turn steering wheel to full left and right lock at least 5 times with engine off.

Then lower vehicle (load on front wheels) and turn steering wheel to full left and right lock at least 10 times with engine running until the system is free of air.

Check oil level and correct if necessary.

3. Check toe at front axle and adjust if necessary.
4. Adjust mechanical steering stops.
5. Adjust hydraulic steering limiter.

The distance between the stop screw and the axle stop as the hydraulic limiter starts to operate must match the values below (in contrast to the documentation in WIS):

Left: max. 2-8 mm

Right: max. 2-5 mm

6. Test of power assistance when reversing at full steering angle (to both sides).

If the power assistance for centering the steering commences too late, the hydraulic steering angle must be adjusted.

Attachments	
File	Description
Kraftmessung.jpg	Example of a commercially available scale for measuring steering force at steering gear.
Typschild.JPG	Steering gear OK as of:

	- Production date 02/2014 - Serial number 01545
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<b>Symptoms</b>
Chassis/suspension / Suspension characteristic / Pulls to the right
Chassis/suspension / Suspension characteristic / Unsatisfying straight ahead running

<b>Parts</b>							
Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part
A 463 460 07 01			Steering gear	1	Production date as per identification plate as of 02/2014 and at least 1545.	X	

<b>Work units</b>				
Op. no.	Operation text	Time	Damage code	Note
			40214 B5	Vehicle OK only due to wheel alignment check (step 2)
			46401 17	Vehicle OK only after steering gear replacement (step 3)

<b>WIS-References</b>			
Document number	Title	Note	Allocation
AR40.20-P-0200AC	Perform wheel alignment check		Remedy
AR46.20-P-0500GY	Remove/install steering gear		Remedy
AR40.20-P-0345AC	Measure/adjust wheel angle	Adjustment of mechanical steering stop	Remedy
AR46.25-P-3090F	Check/adjust hydraulic limiter	Important! Adjustment values: Left: max. 2-8 mm Right: max. 2-5 mm	Remedy

<b>Validity</b>		
Vehicle	Engine	Transmission
463.202	*	*
463.236	*	*
463.237	*	*
463.242	*	*

# XENTRY

463.272	*	*
463.273	*	*
463.274	*	*
463.346	*	*