



## Correct Diagnostic Procedure for 2003-2019 Sprinter Van Front Lower Ball Joints

<b>Brand</b>	Supreme/TTX	<b>Product</b>	Ball Joints	<b>Date</b>	February 2021
<b>Part Number(s)</b>	MK7455/MS25516/TXK7455/TXMS25516				

The Dodge/Freightliner/Mercedes-Benz Sprinter 2500 & 3500 van platform features a front suspension design wherein the front lower ball joints are in constant compression, even while the van is raised and the front wheels off the ground.

Due to this design, it may be possible to incorrectly diagnose ball joint wear. The traditional method of raising or jacking the lower A arm and prying on the knuckle to measure axial (up and down) "play" is not applicable and may show visible movement which is not relevant to a correct diagnosis. The traditional method also may cause damage to the ball joint dust boot.

### To correctly diagnose ball joint wear on Sprinter vans, it is important to adhere to the following:

- Ensure to reference original factory service manual for proper diagnostic procedure and all related specifications and values. Additionally, it is advised to reference Mercedes-Benz TSB LI33.00-N-066643 for further information.
- Raise the van until the front wheels are no longer in contact with the ground. Use the correct center jacking point.
- While the vehicle is being raised, observe and measure by hand **lateral (side to side)** play in the ball joint(s). Lateral movement exceeding 3mm requires ball joint replacement.
- Tools are not required to inspect ball joint dust boot. If the boot is damaged, replace ball joint.

Always ensure to follow the correct diagnostic procedure as outlined in the service manual, as this will prevent misdiagnosis and unnecessary repairs.



## Ball joint check on front axle

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Topic number	LI33.00-N-066643
Version	2
Function group	33.00 General
Date	10-18-2017
Validity	Model 901.###, 902.###, 903.###, 904.###, 905.###, 906.###
Reason for change	Addition of 906.###
Reason for block	

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### Complaint:

- Supporting ball joint has too much play.
- Supporting ball joint makes noises.

Attachments	
File	Description
01.jpg	Supporting ball joint check

### Cause:

- Incorrect diagnosis of supporting ball joint.
- The supporting joint has been exposed to extreme operating conditions (e.g. rough roads), which has caused damage to the rubber boot and this has resulted in increased wear.
- The supporting ball joint is assumed to be the component causing the noise when the vehicle is driven on uneven road surfaces or on bends.

### Remedy:

Due to the fact that supporting ball joints are frequently replaced unnecessarily, we would once again like to point out that checking the supporting ball joints for axial play is not required and is not possible.

The wear behavior of the supporting joints under normal operating and service conditions is designed for the "vehicle's service life".

**Note:** The following test steps for testing supporting ball joints have been agreed upon with the leading test organizations:

The supporting ball joints of the front axle must be checked for unacceptably high wear and to establish whether the dust boot is seated correctly and is undamaged. The stabilizer bar, shock-absorber struts, springs and their attachments must be checked to establish whether they are the cause of the noise.

#### Checking for wear:

- Raise the vehicle at the front axle at the center of the crossmember at the level of the leaf spring using a floor jack until the wheels are no longer in contact with the ground.
- When raising the vehicle, monitor whether there is lateral misalignment (radial play) in the supporting joint.
- Misalignment of more than 3 mm is rated as a serious defect by the technical inspection associations.

#### Checking dust boot:

- Visual inspection for correct seating and possible damage.
- Squeeze the boot together (using your fingers, not tools) to check the concealed parts and to establish whether moisture has penetrated the joint.
- Damage to the dust boot must be rated as a serious defect (if such damage exists, the supporting joint can be expected to fail soon).

# XENTRY TIPS

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## Note:

Checking for wear by means of a pry bar or comparable tool is not recommended by the manufacturer. If this is performed there is a risk of the ball joint bearing shell being damaged due to excessive test forces and / or the rubber boot being damaged as a result of being trapped.

Symptoms
Chassis/suspension / Noises / Cracking
Chassis/suspension / Noises / Knocks
Chassis/suspension / Noises / Thumping
Chassis/suspension / Suspension/Dampening / Suspension system noises / Thumping

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			33113 36	Front axle lower supporting joint – Noise The listed damage code is not to be considered as an acceptance of costs. The general guidelines in the Warranty Manual apply.
			33113 D1	Front axle lower supporting joint – The listed damage code is not to be considered as an acceptance of costs. The general guidelines in the Warranty Manual apply.

Validity		
Vehicle	Engine	Transmission
Sprinter I	*	*
Sprinter II	*	*
Sprinter III	*	*

Attachments
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# XENTRY TIPS

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01.jpg:

