

CGS TYRES

Continental SilentSpeedTyre SST

Noise levels in the driver's cab when driving on the road

DLG Test Report 5892 F



Picture 1:
Continental
SilentSpeedTyre SST
on the test tractor



Applicant

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Short description

The Continental SilentSpeedTyre SST is a conventional design radial tyre for use on tractors. It has been optimised in terms of noise levels in the driver's cab for driving on the road at high speed.

According to information provided by the manufacturer CGS TYRES, this is achieved through the tyre casing's optimised transmission performance when the lugs reach the critical frequency range.

What the test involves

The noise levels on the tractor tyres were measured on a flat stretch without any load on the tractor. Tyres of the same size and tread

pattern design made by the same manufacturer were used for comparison. Other criteria were not tested.

Assessment – summary

Test feature	Test result	Mark
Noise level in the driver's cab when driving on the road at over 40 km/h (25 mph) compared with conventional tyres made by the same manufacturer	very good	++

Rating range: ++/+/o/-/-- (o = standard)

Technical data

	Test tyre	Comparative tyre
Designation	Continental SilentSpeedTyre SST	ContiContract AC 65
Front tyres		
Tyre size	540/65 R 28	540/65 R 28
LI/SI	142D	142D
No. of lugs	20 pairs of lugs	20 pairs of lugs
Tyre inflation	1.0 bar	1.0 bar
Rear tyres		
Tyre size	650/65 R 38	650/65 R 38
LI/SI	157D	157D
No. of lugs	22 pairs of lugs	22 pairs of lugs
Tyre inflation	1.2 bar	1.2 bar
Details of test tractor		
Front axle load	2955 kg	
Rear axle load	4045 kg	

Measuring procedure

A John Deere 6930 AutoQuadPlus tractor was driven along a relatively level country road with a smooth asphalt surface at speeds from 40 km/h (25 mph) up to the tractor's maximum speed of 54 km/h (33 mph) in increments of 1 km/h (0.6 mph) and the journeys were measured.

A Class 1 sound level meter (Norsonic 118) was used to measure the sound level in the cab A.

The microphone of the meter was hung in the middle of the cab behind the driver's head and faced backwards to eliminate engine and transmission noise as far as possible.

Two series of measurements were made with the rear window open and closed.



Picture 2:
Positioning the microphone



Picture 3:
Sound level meter

Test results and individual assessments

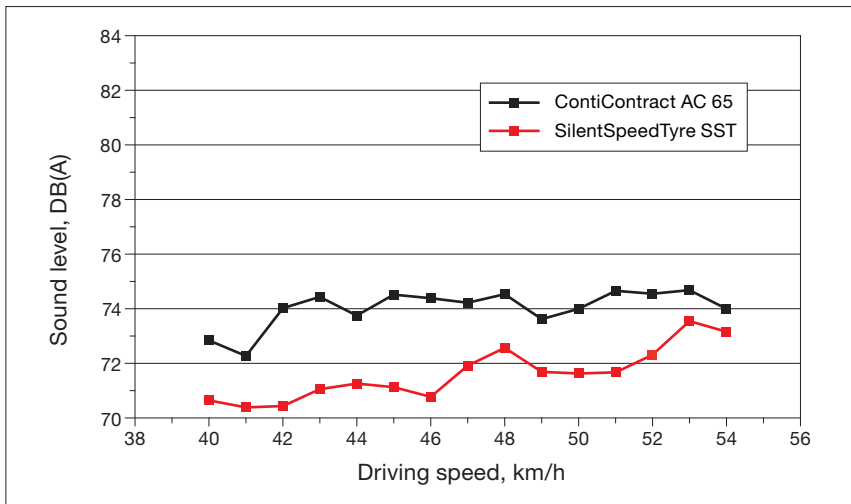
The diagrams show clearly that at all the driving speeds measured the Continental SilentSpeedTyre SST is substantially quieter than the conventional tyre. With the cab closed, the average difference in all readings is 2.4 dB(A), with the maximum difference being 3.6 dB(A) at 46 km/h (28 mph). With the rear window open, the average difference is 2.0 dB(A), with the maximum difference being 2.8 dB(A) at 48 km/h (29.8 mph) and 49 km/h (30.5 mph) respectively.

The frequency analyses made show that the highest levels occurred at 125 Hz. This frequency is within the lug frequency range of the rear axle tyres. The influence of this on the cab inner noise is more noticeable here.

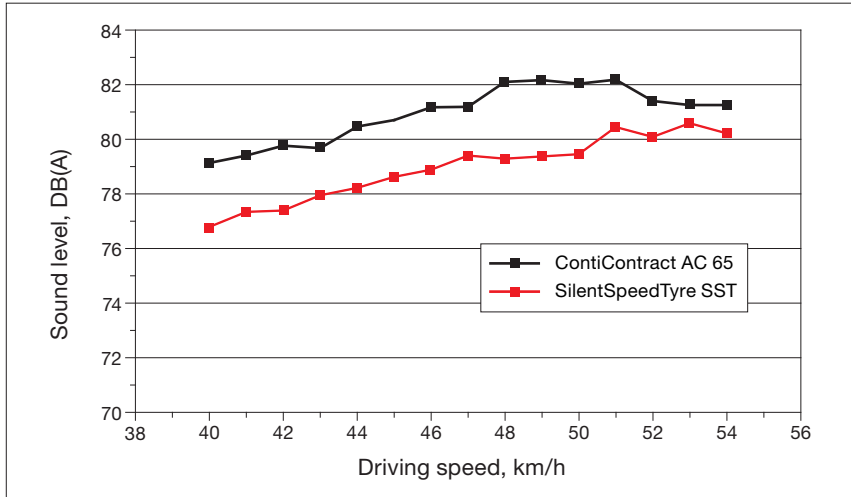
With the Continental SilentSpeedTyre SST the values are up to 7.5 dB lower than with standard tyres.

The differences in the noise levels can be clearly noticed. The droning sound from the tyre lugs, which is audible and quite annoying when driving fast on the road over longer distances, is substantially reduced with the SST tyre.

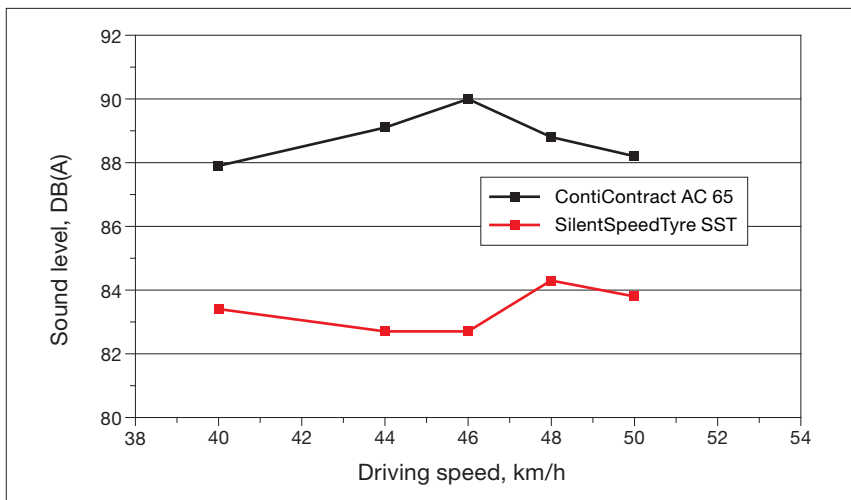
These results were rated as 'very good'.



Picture 4: Overall noise level measured in the cab, rear window closed



Picture 5: Overall noise level measured in the cab, rear window open



Picture 6: Overall noise level measured in the cab at 125 Hz, rear window closed, selected speeds

Test carried out by

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ENTAM – European Network for Testing of Agricultural Machines, is the network of European testing stations. ENTAM's aim is the Europe-wide distribution of test results for farmers, agricultural equipment merchants and manufacturers.

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