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and of the Council with regard to vehicle construction and general
requirements for the approval of agricultural and forestry vehicles

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ANNEX 14

ANNEX

to the

Commission Delegated Regulation

of XXX

**supplementing and amending Regulation (EU) No 167/2013 of the European Parliament
and of the Council with regard to vehicle construction and general requirements for the
approval of agricultural and forestry vehicles**

ANNEX XIV

Requirements applying to the driving seat

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1. Definitions

For the purpose of this Annex the following definitions shall apply:

- 1.1. "Seat surface" means the almost horizontal area of the seat which supports the driver when seated.
- 1.2. "Lateral seat supports" means the devices or forms of the seat surface which prevent the driver from sliding sideways.
- 1.3. "Seat armrests" means the devices on either side of the seat which support the driver's arms when he is seated.
- 1.4. "Depth of the seat surface" means the horizontal distance between the Seat Reference Point (S) and the front edge of the seat surface.
- 1.5. "Width of the seat surface" means the horizontal distance between the outside edges of the seat surface measured in a plane perpendicular to the median plane of the seat.
- 1.6. "Load adjustment range" means the range between the two loads corresponding to the mean positions in the suspension system curves plotted for the heaviest and lightest driver.
- 1.7. "Suspension travel" means the vertical distance between the highest position and the position at a given moment of a point situated on the seat surface 200 mm in front of the Seat Reference Point (S) in the median longitudinal plane.
- 1.8. "Vibration" means the vertical movement up and down of the driver's seat.
- 1.9. "Vibration acceleration (a)" means the second differential of the vibration displacement with respect to time.
- 1.10. "Rms value of the acceleration (a_{eff})" means the square root of the mean square of the accelerations.
- 1.11. "Weighted vibration acceleration (a_w)" means the weighted vibration acceleration determined with the help of a weighting filter in accordance with point 3.5.3.3.5.2.

$\ll a_{wS}$	=	rms value of the weighted seat vibration acceleration measured during a bench test or a standard roadway test;
a_{wB}	=	rms value of the weighted vibration acceleration measured at the seat attachment during a bench test;
a_{wB}^*	=	reference rms value of the weighted vibration acceleration measured at the seat attachment;
a_{wS}^*	=	corrected rms value of the weighted seat vibration acceleration measured during a bench test;
a_{wF}^*	=	rms value of the weighted vibration acceleration measured at the seat attachment during a standard roadway test.»

- 1.12. "Vibration ratio" means the ratio of the weighted vibration acceleration measured on the driver's seat to that measured at the seat attachment in accordance with point 3.5.3.3.2.
- 1.13. "Vibration class" means the class or group of tractors which show the same vibration characteristics.
- 1.14. "Category A tractor" means a tractor which can be assigned to a given vibration class by reason of similar design features.

The characteristics of these tractors are as follows:

number of axles: two having wheels or rubber tracks on at least one axle

suspension: unsuspended rear axle

Category A tractors shall be divided up into three classes:

Class I	tractors having an unladen mass of up to 3 600;
Class II	tractors having an unladen mass of 3 600 — 6 500 kg;
Class III	tractors having an unladen mass of more than 6 500 kg»

- 1.15. "Category B tractor" means a tractor which cannot be assigned to a vibration class in Category A.
- 1.16. "Seats of the same type" means seats which do not differ in any essential respects; the only aspects in which the seats may differ being as follows:
- dimensions;
 - position and inclination of the backrest;
 - inclination of the seat surface;
 - longitudinal and vertical adjustment of the seat.

2. General requirements

- 2.1. The driver's seat must be designed to ensure a comfortable position for the driver when controlling and manoeuvring the tractor, and to afford him the utmost protection as regards health and safety.
- 2.2. The seat must be adjustable in the longitudinal direction and in the height without the use of a tool.
- 2.3. The seat must be designed to reduce shocks and vibration. It must therefore be well sprung, have good vibration absorption and provide adequate support at the rear and sides.

The lateral support is considered adequate if the seat is designed to prevent the driver's

body from slipping sideways.

- 2.3.1. The seat must be suitable for persons of different mass. Any adjustment necessary in order to comply with this requirement must be carried out without the use of tools.
- 2.4. The seat surface, the backrest, the lateral supports and, where fitted, the removable, folding or fixed armrests, must be padded and the coating material must be washable.
- 2.5. The Seat Reference Point (S) must be calculated in the manner specified in Appendix 8.
- 2.6. Save as otherwise provided, the measurements and tolerances must comply with the following requirements:
 - 2.6.1. the measurements given must be expressed in whole units, if necessary rounded off to the nearest whole number of units;
 - 2.6.2. the instruments used for making measurements must enable the measured value to be rounded off to the nearest whole unit and must be accurate within the following tolerance limits:
 - for length: $\pm 0,5\%$,
 - for angle measurements: $\pm 1^\circ$,
 - for determination of the mass of the tractor: ± 20 kg,
 - for measurement of tyre pressure: $\pm 0,1$ bar;
 - 2.6.3. for all data relating to dimensions, a tolerance of $\pm 5\%$ is allowed.
- 2.7. The seat must undergo the following tests, carried out on the same seat and in the order indicated below:
 - 2.7.1. determination of the suspension characteristics and the range of adjustment to the driver's mass;
 - 2.7.2. determination of lateral stability;
 - 2.7.3. Determination of vertical vibration characteristics.
 - 2.7.4. Determination of the damping characteristics in the resonance range.
- 2.8. If the seat is manufactured so that it can revolve about a vertical axis, then tests are carried out with the seat facing the forward position, locked in a position parallel with the median longitudinal plane of the tractor.
- 2.9. The seat undergoing the above tests must possess the same characteristics with respect to construction and fittings as the seats in series production.
- 2.10. Before the tests are carried out, the seat must have been run in by the manufacturer.
- 2.11. A test report, which confirms that the seat has completed all the specified tests without damage and which includes details of the seat vibration characteristics, must be prepared by the test laboratory.
- 2.12. Seats tested for Class I tractors are suitable only for tractors of that class, whereas seats

tested for Class II tractors are suitable for Class I or Class II tractors and seats tested for class III tractors are suitable for class II and III tractors.

2.13. A vehicle equipped with a straddle seat and handlebars is deemed to comply with the requirements of points 2.2 to 2.7 where the straddle seat allows the operator to adjust his position on the seat so that he can effectively operate the control devices and where the vehicle passes the vibration test on the standard roadway as defined in point 3.5.3.

2.14. As an alternative to the provisions of point 3.5, for vehicles of category C with steel tracks, the vibrations transmitted to the driver may be measured according to the specifications of paragraph 5.3.2 of ISO 6395:2008 with the unladen vehicle travelling over a layer of humid sand at a constant speed of 5 km/h (+/- 0.5 km/h) and with the engine at rated speed. The measurement shall be done following specifications of point 3.5.3.3.

3. Special requirements

3.1. Seat surface dimensions

3.1.1. The depth of the seat surface, measured parallel to and at a distance of 150 mm from the median longitudinal plane of the seat, must be 400 ± 50 mm (see figure 1).

3.1.2. The width of the seat surface, measured perpendicular to the median plane of the seat, 150 mm in front of the Seat Reference Point (S) and at not more than 80 mm above that point, must be at least 450 mm (see figure 1).

3.1.3. The depth and width of the surface of seats intended for tractors in which the minimum rear-wheel track width does not exceed 1 150 mm may be reduced to not less than 300 and 400 mm respectively if the design of the tractor prevents compliance with the requirements of points 3.1.1 and 3.1.2.

3.2. Position and inclination of the backrest

3.2.1. The upper edge of the backrest of the seat must be at least 260 mm above the Seat Reference Point (S) (see figure 1).

3.2.2. The backrest must have an inclination of $10 \pm 5^\circ$ (see figure 1).

3.3. Inclination of the seat surface

3.3.1. The inclination towards the rear (see angle α in figure 1) of the surface of the loaded cushion must be 3 to 12° in relation to the horizontal, measured with the loading device in accordance with Appendix 8.

3.4. Seat adjustment (see figure 1)

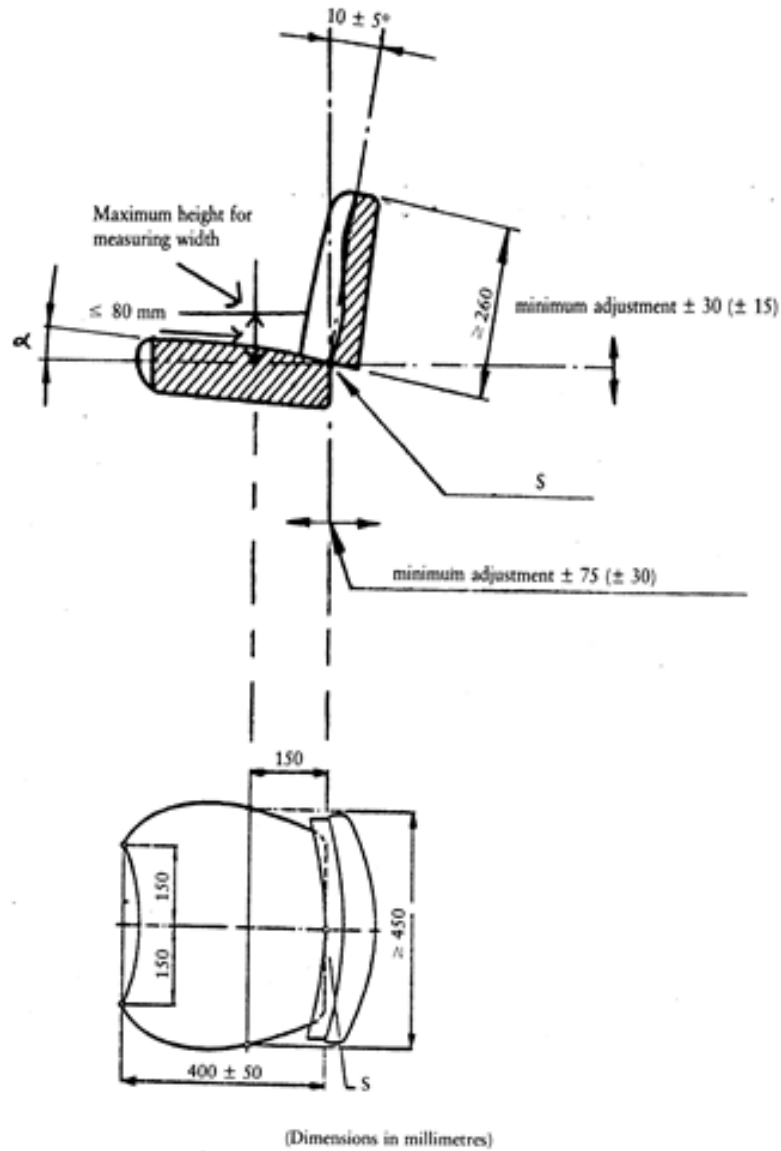
3.4.1. The seat must be adjustable in the longitudinal direction over a minimum distance of:

- 150 mm for tractors with a minimum rear-wheel track width of more than 1 150 mm,
- 60 mm for tractors with a minimum rear-wheel track width of 1 150 mm or less.

3.4.2. The seat must be adjustable in the vertical direction over a minimum distance of:

- 60 mm for tractors with a minimum rear-wheel track width of more than 1 150 mm,
- 30 mm for tractors with a minimum rear-wheel track width of 1 150 mm or less.

3.4.3. As an alternative to the requirements set out in points 3.4.1 and 3.4.2, vehicles not equipped with an adjustable seat shall be equipped with a steering column and pedal(s) adjustable in the longitudinal and vertical directions over the minimum distances set out in points 3.4.1. to 3.4.2.



- Figure 1 -

Special requirements of the driver's seat

3.5. Seat tests

- 3.5.1. Determination of the suspension characteristics and the range of adjustment to the driver's mass.
 - 3.5.1.1. The suspension characteristics are determined by a static test. The range of adjustment to the driver's mass is calculated from the suspension characteristics. These calculations are not necessary in the case of seats that cannot be manually adjusted to the driver's mass.
 - 3.5.1.2. The seat is mounted on a test stand or on a tractor and a load applied to it, either directly or by means of a special device; this load must not differ by more than 5 N from the nominal load. The measuring error for the suspension travel shall not exceed ± 1 mm. The load must be applied in accordance with the procedure laid down in the Appendix 8.
 - 3.5.1.3. A complete characteristic curve representing the deflection of the suspension system must be plotted from zero load to maximum load, and back to zero. The load graduations at which the suspension travel is measured must not exceed 100 N; at least eight measurement points must be plotted at approximately equal intervals in the suspension travel. The point taken as the maximum load should be either that at which no further suspension travel can be measured, or a load of 1 500 N. After each application or removal of the load, the suspension travel must be measured 200 mm in front of the Seat Reference Point (S) in the median longitudinal plane of the seat surface. After application or removal of the load, the seat must be allowed to return to its at-rest position.
 - 3.5.1.4. In the case of seats with a mass adjustment scale, the characteristic curves representing the deflection of the suspension system are plotted at mass adjustments for drivers having a mass of 50 and 120 kg. In the case of seats without a mass adjustment scale and with adjustment stops, measurements are taken at the lowest and the highest mass adjustment. In the case of seats without a mass adjustment scale or adjustment stops, the adjustment must be so selected that:
 - 3.5.1.4.1. for the lower mass adjustment limit, the seat just returns to the top of the suspension travel when the load is removed, and
 - 3.5.1.4.2. for the upper mass adjustment limit, the load of 1 500 N depresses the seat to the lowest limit of the suspension travel.
 - 3.5.1.5. The mean position of the suspension system is the position which the seat assumes when it is depressed by half the full travel of the suspension system.
 - 3.5.1.6. Since the characteristic curves of the suspension system are generally hysteresis loops, the load must be determined by drawing a centre line through the loop (see definition of point 1.6. and sections A and B of Appendix 1).
 - 3.5.1.7. To determine the limits of the adjustment range as a function of the driver's mass, the vertical forces determined in accordance with point 3.5.1.6 for points A and B (see Appendix 1) must be multiplied by the scale factor 0,13 kg/N.
- 3.5.2. Determination of lateral stability
 - 3.5.2.1. The seat must be set for the upper limit of the weight adjustment and connected to the test stand or to the tractor in such a way that its base plate rests on a rigid plate (test stand) not smaller than the base plate itself.

3.5.2.2. A test load of 1 000 N is applied to the surface or cushion of the seat. The point of application must lie 200 mm in front of the Seat Reference Point (S) and alternately on the two sides 150 mm from the plane of symmetry through the seat.

3.5.2.3. During application of the load, the variation in the lateral angle of inclination of the seat surface is measured in the end settings for horizontal and vertical seat adjustment. The permanent deformation close to the point of application of the load is not to be taken into consideration.

3.5.3. Determination of the vertical vibration characteristics

The seat vibration is determined by tests on a test stand and/or a standard roadway depending on whether the seat is intended for a class (or classes) of Category A tractor or for a Category B tractor.

3.5.3.1. Testing on the test stand

3.5.3.1.1. The test stand must simulate the vertical vibrations at the point of attachment of the driver's seat. The vibrations are generated by means of an electro-hydraulic device. The set values to be used are either those specified in Appendices 3, 4a and 4b for the class of tractor in question or the double-integrated acceleration signals recorded at the seat attachment of a Category B tractor moving at a speed of $12 \pm 0,5$ km/h on a standard roadway as defined in point 3.5.3.2.1. To generate the vibrations, an uninterrupted double run of the set values must be used.

The transition from the end of the sequence of acceleration signals recorded on the standard roadway in the first run to the start of the second run must be smooth and jolt-free. The measurements must not be made during the first run of the set values or of the acceleration signals. More values than the 700 laid down in Appendices 3 and 4a and 4b may be used if these values were calculated, for example, with a cubic Spline function from the original 700 values.

3.5.3.1.2. Besides an attachment for the test seat, the platform must contain a steering wheel and footrest. Its configuration must be as shown in Appendix 5.

3.5.3.1.3. The test stand must have a high degree of flexural and torsional rigidity and its bearings and guides must have no more than the technically necessary clearance. If the platform is carried on an oscillating arm, the dimension R must be not less than 2 000 mm (see Appendix 5). The magnitude of the vibration ratio at frequencies between 0,5 and 5,0 Hz shall be within the range $1,00 \pm 0,05$, measured at intervals not exceeding 0,5 Hz. The phase shift shall not vary by more than 20° throughout the same frequency range.

3.5.3.2. Testing on a standard roadway

3.5.3.2.1. The roadway consists of two parallel strips spaced according to the wheel track of the tractor. Both strips must be made of a rigid material, such as wood or concrete, and be formed either of blocks set in a base structure or of a continuous smooth surface. The longitudinal profile of each track strip is defined by the ordinates of elevation in relation to a base level; these ordinates are shown in the tables in Appendix 2. With regard to the roadway, the elevation is defined at intervals of 16 cm along each strip.

The roadway must be firmly set in the ground and the distance between the strips must deviate only slightly over its entire length; the tractor's wheels must be fully supported at all times. Where the strips are formed of blocks, these must be 6 to 8 cm thick, with a distance of 16 cm between the centres of the blocks. The length of the standard roadway

shall be 100 m.

The measurements must begin as soon as the axis of the rear axle of the tractor is perpendicular to point $D = 0$ on the roadway, and end as soon as the axis of the front axle of the tractor is perpendicular to point $D = 100$ of the test roadway (see the table in Appendix 2).

3.5.3.2.2. Measurements shall be taken at a speed of $12 \pm 0,5$ km/h.

The prescribed speed must be maintained without the use of brakes. The vibrations must be measured on the seat and at the point where the seat is attached to the tractor, with a light and a heavy driver.

The speed of 12 km/h must be reached after a run-up track has been traversed. The surface of this run-up track must be flat and must join the standard roadway without any change in level.

3.5.3.2.3. The seat must be set for the driver's mass in accordance with the manufacturer's instructions

3.5.3.2.4. The tractor must be fitted with a protective frame and/or cab unless of a type for which this equipment is not required. It must not carry any ancillary equipment. Moreover, there must be no ballast on the wheels or framework, and no fluid in the tyres.

3.5.3.2.5. The tyres used during the test must have the standard dimensions and ply-rating, as specified in the manufacturer's instructions. The depth of the tread must not be less than 65 % of the depth of a new tread.

3.5.3.2.6. The side-walls of the tyres must not be damaged. The pressure of the tyre must correspond to the arithmetical mean of the reference pressures recommended by the tyre manufacturer. The wheel track must correspond to that used under normal working conditions for the tractor model on which the seat is fitted.

3.5.3.2.7. The measurements at the point of seat attachment and on the seat itself must be made during the same run.

For measuring and recording the vibrations, an accelerometer, a measuring amplifier and a magnetic tape recorder or direct-reading vibration meter shall be used. The specifications for these instruments are as laid down in 3.5.3.3.2 to 3.5.3.3.6.

3.5.3.3. Specifications for tests on roadway and test stand

3.5.3.3.1. Driver's mass

The tests must be carried out with two drivers: one with a total mass of 59 ± 1 kg, of which not more than 5 kg may be carried in a weighting belt around the body; the other with a mass of 98 ± 5 kg with a maximum mass of 8 kg in the weighting belt.

3.5.3.3.2. Position of the accelerometer

To measure the vibrations transmitted to the driver, an accelerometer is fixed on a flat plate with a diameter of 250 ± 50 mm, the central part of which must be rigid up to a diameter of 75 mm and must include a rigid device to protect the accelerometer. This plate must be placed in the middle of the seat surface between the seat and the driver and have a non-slip surface.

To measure the vibrations at the seat attachment, an accelerometer must be fixed near to this attachment at a point not more than 100 mm from the median longitudinal plane of the tractor and not outside the vertical projection of the seat surface on the tractor.

3.5.3.3.3. Measurement of vibration acceleration

The accelerometer and the associated amplifying and transmitting equipment must respond to vibrations with an r.m.s. value of 0,05 m/s², and be capable of measuring vibrations with an r.m.s. value of 5 m/s² and a crest factor (ratio of peak to r.m.s. value) of 3 without distortion and with a maximum error of ± 2,5 % over the range 1 to 80 Hz.

3.5.3.3.4. Magnetic tape recorder

If a tape recorder is used, it must have a maximum reproduction error of ± 3,5 % in a frequency range of 1 to 80 Hz, including change of tape speed during replay for analysis.

3.5.3.3.5. Vibration meter

3.5.3.3.5.1. Vibrations of more than 10 Hz may be disregarded. It is therefore permissible to connect upstream of the measuring instrument a low-pass filter with a cut-out frequency of about 10 Hz and an attenuation of 12 dB per octave.

3.5.3.3.5.2. This instrument must incorporate an electronic weighting filter between the sensor and the integrator device. The filter must correspond to the curve shown in Appendix 6 and the margin of error must be ± 0,5 dB in the 2 to 4 Hz frequency band and ± 2 dB for the other frequencies.

3.5.3.3.5.3. The electronic measuring device must be capable of indicating either:

- the integral (I) of the square of the weighted vibration acceleration (a_w) for a test time (T) $I = (\int_0^T) (a_w)^2 dt$
- or the square root of that integral
- or directly the r.m.s. value of the weighted vibration acceleration (a_{weff}) $a_{\text{weff}} = \sqrt{I/T} = (\sqrt{I/T})$

The inaccuracy of the entire system for measuring the rms value of the acceleration must not exceed ± 5% of the measured value.

3.5.3.3.6. Calibration

All instruments must be regularly calibrated.

3.5.3.3.7. Evaluation of vibration tests

3.5.3.3.7.1. During each test, the weighted vibration acceleration for the whole test time must be determined with the vibration meter specified in point 3.5.3.3.5.

3.5.3.3.7.2. The test report must give the arithmetic mean value of the rms values of the weighted seat vibration acceleration (a_{wS}) for both the light driver and the heavy driver. The test report must also give the ratio of the arithmetic mean of the rms values of the weighted vibration acceleration measured on the seat (a_{wS}) to the arithmetic mean of the rms values of the weighted vibration acceleration measured at the seat attachment (a_{wB}).

This ratio shall be given to two decimal places.

3.5.3.3.7.3. The ambient temperature during the vibration test must be measured and shown in the report.

3.5.4. Vibration test for tractor seats in accordance with their intended use

3.5.4.1. A seat intended for use on a class (or classes) of Category A tractors must be tested on a vibration stand using the appropriate set value signals.

3.5.4.2. A seat intended for use on a type of Category B tractor must be tested on a standard roadway with a tractor of that type. However, a simulation test may also be carried out using a set value signal corresponding to the acceleration curve which was determined during the standard roadway test with the type of tractor for which the seat is intended.

3.5.4.3. A seat intended for use only on a particular type of Category A tractor may also be tested in accordance with the requirements of 3.5.4.2. In this case, component type-approval will be granted only for the type of tractor for which the test seat is intended.

3.5.5. Procedure used for determining the weighted vibration acceleration of seats intended for Category A tractors

3.5.5.1. The test on the vibration test stand shall be carried out in accordance with point 3.5.3.1. the value a_{wB} actually occurring at the seat attachment during measurement must be determined. In the case of deviations from the reference value:

$a*wB =$	2,05 m/s ² for class I, category A tractors.
$a*wB =$	1,5 m/s ² for class II, category A tractors.
$a*wB =$	1,3 m/s ² for class III, category A tractors.

The acceleration a_{wS} measured at the driver's seat must be corrected in accordance with the following equation: $(a_{wS}^*) = (a_{wS})(a_{(wB)}^*)/(a_{wB})$

3.5.5.2. For each of the two drivers provided for in point 3.5.3.3.1, the weighted acceleration of the vibratory movement shall be measured at the seat for 28 seconds in the case of classes I and III, and for 31 seconds in the case of class II. The measurement must begin at the set value signal corresponding to $t = 0$ seconds and end at the set value signal corresponding to $t = 28$ or 31 seconds (see table in Appendices 3, 4a and 4b). At least two test runs must be carried out. The measured values must not deviate from the arithmetical mean by more than $\pm 5\%$. Each complete set point sequence must be reproduced in 28 or $31 \pm 0,5$ s.

3.5.6. Procedure used for determining the weighted vibration acceleration of seats intended for Category B tractors

3.5.6.1. In accordance with the requirements of points 3.5.4.2, the seat vibration tests are not applicable to a class of tractors, but only to each tractor type for which the seat is intended.

3.5.6.2. The standard roadway test must be carried out in accordance with the requirements of points 3.5.3.2 and 3.5.3.3. The vibration acceleration measured on the driver's seat (a_{wS}) need not be corrected. At least two test runs must be carried out on the standard roadway. The measured values must not deviate from the arithmetic mean by more than

± 10%.

3.5.6.3. If a bench test is conducted, it must be carried out in association with a standard roadway test pursuant to the requirements of points 3.5.3.1 and 3.5.3.3.

3.5.6.4. The vibration test stand shall be adjusted in such a way that the rms value of the weighted vibration acceleration recorded at the seat attachment (a_{wB}) deviates by less than ± 5 % from the rms value of the weighted vibration acceleration at the seat attachment recorded on the standard roadway (a_{wF}^*).

In the event of deviations from the value (a_{wF}^*) measured at the seat attachment during the test run, the weighted vibration acceleration recorded at the driver's seat during the test on the test stand must be corrected as follows: (a_{wS}^*) = (a_{wS})(a_{wF}^*)/(a_{wB})

Each of the tests on the test stand must be carried out twice. The measured values must not deviate from the arithmetic mean by more than ± 5%.

3.5.7. Test for determining the damping characteristics in the resonance range

3.5.7.1. This test is carried out on the test stand as specified in point 3.5.3.1. However, account must be taken of the following:

3.5.7.2. Instead of the set values specified in the second paragraph of point 3.5.3.1.1 (see Appendices 3, 4a and 4b), sinusoidal oscillations of ± 15 mm amplitude with a frequency of 0,5 to 2 Hz are generated. The frequency range is to be run through with a constant rate of frequency change in not less than 60 seconds or at intervals no greater than 0,05 Hz with increasing frequency, and in an identical manner with decreasing frequency. During this measurement, it is permissible to filter the signals emitted by the accelerometers through a bandpass filter with cut-off frequencies of 0,5 and 2,0 Hz.

3.5.7.3. The seat is to be loaded with a ballast of 40 kg in the first test and with a mass of 80 kg in the second test; the ballast is to be applied on the device illustrated in Figure 1 of Appendix 8, with the same line of action of the force as when determining the Seat Reference Point (S).

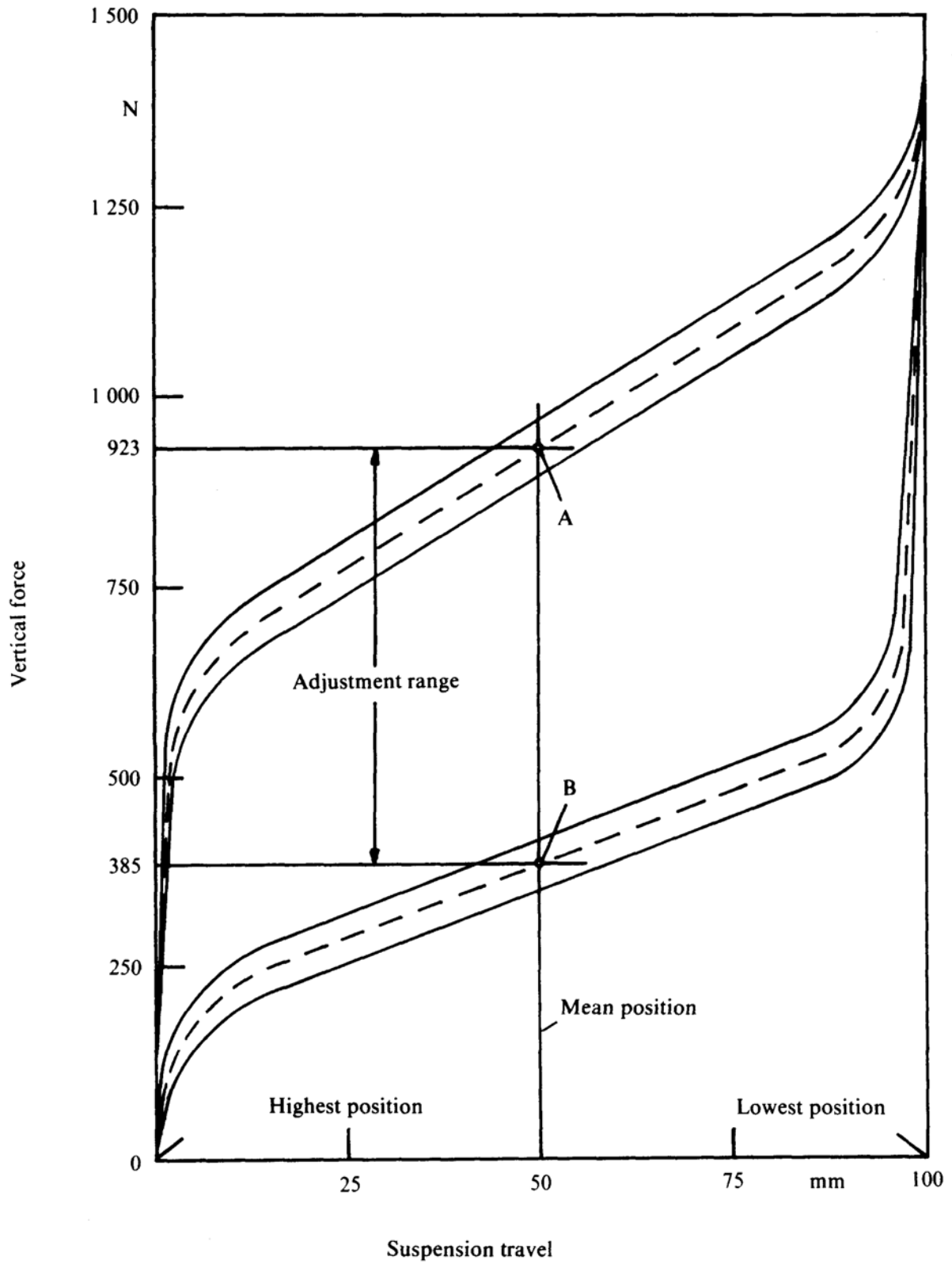
3.5.7.4. The ratio of the rms values of the vibration acceleration on the seat surface a_{wS} to those at the seat attachment a_{wB} : $V = (a_{wS})/(a_{wB})$

is to be determined in the frequency range from 0,5 to 2,0 Hz at intervals no greater than 0,05 Hz.

3.5.7.5. The ratio measured must be given in the test report to two decimal places.

Appendix 1

Determination of the characteristics curves of the suspension system and the load adjustment range (point 3.5.1)



Appendix 2

Test on standard roadway

Table of elevation ordinates in relation to a basic level defining the surface of each strip of the roadway (point 2.5.3.2.1)

D	=	distance from the beginning of the standard roadway (in metres)
L	=	ordinate of the left-hand strip (mm)
R	=	ordinate of the right-hand strip (mm)

D	L	R
0	115	140
0-16	110	125
0-32	110	140
0-48	115	135
0-64	120	135
0-80	120	125
0-96	125	135
1-12	120	125
1-28	120	115
1-44	115	110
1-60	110	100
1-76	110	110
1-92	110	110
2-08	115	115
2-24	110	110
2-40	100	110
2-56	100	100
2-72	95	110
2-88	95	95
3-04	90	95
3-20	90	100
3-36	85	100
3-52	90	100
3-68	90	115
3-84	95	110
4-00	90	110
4-16	90	95
4-32	95	100
4-48	100	100
4-64	100	90

4-90	90	90
4-96	90	90
5-12	95	90
5-28	95	70
5-44	95	65
5-60	90	50
5-76	95	50
5-92	85	50
6-08	85	55
6-24	75	55
6-40	75	55
6-56	70	65
6-72	75	75
6-88	65	75
7-04	65	85
7-20	65	90
7-36	75	95
7-52	75	100
7-68	95	95
7-84	115	110
8-00	115	100
8-16	125	110
8-32	110	100
8-48	110	100
8-64	110	95
8-80	110	95
8-96	110	95
9-12	110	100
9-28	125	90
9-44	120	100
9-60	135	95

9-76	120	95
9-92	120	95
10-08	120	95
10-24	115	85
10-40	115	90
10-56	115	85
10-72	115	90
10-88	120	90
11-04	110	75
11-20	110	75
11-36	100	85
11-52	110	85
11-68	95	90
11-84	95	90
12-00	95	85
12-16	100	95
12-32	100	90
12-48	95	85
12-64	95	85
12-80	95	90
12-96	85	90
13-12	85	85
13-28	75	90
13-44	75	95
13-60	75	90
13-76	70	75
13-92	70	90
14-08	70	100
14-24	70	110
14-40	65	95
14-56	65	100

14-72	65	90
14-88	65	90
15-04	65	85
15-20	55	85
15-36	65	85
15-52	65	85
15-68	55	75
15-84	55	85
16-00	65	75
16-16	55	85
16-32	50	75
16-48	55	75
16-64	65	75
16-80	65	75
16-96	65	85
17-12	65	70
17-28	65	65
17-44	65	75
17-60	65	75
17-76	50	75
17-92	55	85
18-08	55	85
18-24	65	85
18-40	70	75
18-56	75	75
18-72	95	75
18-88	90	75
19-04	90	70
19-20	95	70
19-36	85	70
19-52	85	75

19-68	75	85
19-84	85	85
20-00	75	90
20-16	85	85
20-32	75	70
20-48	70	75
20-64	65	75
20-80	70	75
20-96	65	75
21-12	70	75
21-28	70	85
21-44	70	85
21-60	70	90
21-76	75	95
21-92	75	95
22-08	75	90
22-24	85	90
22-40	85	95
22-58	90	85
22-72	90	85
22-88	95	85
23-04	95	85
23-20	100	85
23-36	100	75
23-52	110	85
23-68	110	85
23-84	110	85
24-00	100	75
24-16	100	75
24-32	95	70
24-48	100	70

24-64	100	70
24-80	115	75
24-96	110	75
25-12	110	85
25-28	100	75
25-44	110	95
25-60	100	95
25-76	115	100
25-92	115	100
26-08	110	95
26-24	115	95
26-40	110	95
26-56	100	95
26-72	100	95
26-88	100	100
27-04	100	95
27-20	100	95
27-36	110	90
27-52	115	90
27-68	115	85
27-84	110	90
28-00	110	85
28-16	110	85
28-32	100	85
28-48	100	90
28-64	90	85
28-80	90	75
28-96	75	90
29-12	75	75
29-28	75	75
29-44	70	75

29-60	75	75
29-76	75	85
29-92	85	75
30-08	75	75
30-24	85	75
30-40	75	75
30-56	70	75
30-72	75	75
30-88	85	75
31-04	90	75
31-20	90	85
31-36	100	75
31-52	100	75
31-68	120	85
31-84	115	75
32-00	120	85
32-16	120	85
32-32	135	90
32-48	145	95
32-64	160	95
32-80	165	90
32-96	155	90
33-12	145	90
33-28	140	95
33-44	140	85
33-60	140	85
33-76	125	75
33-92	125	75
34-08	115	85
34-24	120	75
34-40	125	75

34-56	115	85
34-72	115	75
34-88	115	90
35-04	115	100
35-20	120	100
35-36	120	100
35-52	135	95
35-68	135	95
35-84	135	95
36-00	135	90
36-16	120	75
36-32	115	75
36-48	110	70
36-64	100	65
36-80	110	55
36-96	115	55
37-12	100	50
37-28	115	50
37-44	110	50
37-60	100	65
37-76	90	55
37-92	95	55
38-08	90	35
38-24	90	35
38-40	110	35
38-56	100	35
38-72	115	35
38-88	100	35
39-04	100	35
39-20	110	30
39-36	110	45

39-52	110	50
39-68	100	55
39-84	110	50
40-00	90	55
40-16	85	55
40-32	90	65
40-48	90	65
40-64	90	70
40-80	95	75
40-96	95	75
41-12	95	75
41-28	90	90
41-44	90	95
41-60	85	95
41-76	85	100
41-92	90	100
42-08	90	95
42-24	85	100
42-40	85	110
42-56	95	110
42-72	95	115
42-88	95	115
43-04	100	100
43-20	100	95
43-36	100	95
43-52	100	90
43-68	110	95
43-84	100	100
44-00	110	90
44-16	100	85
44-32	110	90

44-48	110	85
44-64	100	85
44-80	100	90
44-96	95	90
45-12	90	95
45-28	90	100
45-44	95	100
45-60	90	90
45-76	85	90
45-92	75	90
46-08	85	90
46-24	75	90
46-40	75	90
46-56	75	90
46-72	85	90
46-88	85	85
47-04	90	85
47-20	75	85
47-36	65	75
47-52	70	70
47-68	70	75
47-84	70	75
48-00	75	85
48-16	90	95
48-32	95	95
48-48	100	120
48-64	110	100
48-80	115	100
48-96	115	115
49-12	120	115
49-28	120	110

49-44	115	95
49-60	115	90
49-76	115	90
49-92	110	95
50-08	110	100
50-24	100	110
50-40	100	120
50-56	95	120
50-72	95	115
50-88	95	120
51-04	95	120
51-20	90	135
51-36	95	125
51-52	95	120
51-68	100	120
51-84	100	120
52-00	100	120
52-16	100	125
52-32	110	125
52-48	110	125
52-64	100	125
52-80	100	120
52-96	100	120
53-12	110	115
53-28	100	110
53-44	110	110
53-60	95	110
53-76	95	110
53-92	100	110
54-08	95	100
54-24	100	100

54-40	100	100
54-56	100	100
54-72	95	100
54-88	100	100
55-04	100	115
55-20	110	115
55-36	100	110
55-52	110	100
55-68	100	110
55-84	100	110
56-00	100	110
56-16	95	115
56-32	90	110
56-48	95	110
56-64	95	110
56-80	90	100
56-96	100	100
57-12	100	95
57-28	95	100
57-44	100	100
57-60	95	115
57-76	85	110
57-92	90	115
58-08	90	110
58-24	90	100
58-40	85	95
58-56	90	95
58-72	85	90
58-88	90	90
59-04	90	95
59-20	90	115

59-36	90	115
59-52	90	115
59-68	85	110
59-84	75	110
60-00	90	115
60-16	90	120
60-32	90	120
60-48	90	120
60-64	95	120
60-80	95	120
60-96	90	120
61-12	90	115
61-28	95	110
61-44	95	110
61-60	100	100
61-76	110	100
61-92	100	100
62-08	100	100
62-24	95	100
62-40	95	100
62-56	95	100
62-72	90	100
62-88	90	100
63-04	90	100
63-20	90	90
63-36	90	90
63-52	85	90
63-68	85	90
63-84	75	85
64-00	75	85
64-16	75	75

64-32	75	75
64-48	70	75
64-64	70	70
64-80	70	55
64-96	70	45
65-12	65	55
65-28	65	55
65-44	65	65
65-60	55	70
65-76	55	75
65-92	55	75
66-08	55	75
66-24	55	85
66-46	55	85
66-56	65	90
66-72	70	90
66-88	70	110
67-04	65	100
67-20	55	100
67-36	65	100
67-52	50	100
67-68	50	85
67-84	50	90
68-00	50	100
68-16	55	100
68-32	55	95
68-48	65	90
68-64	50	85
68-80	50	70
68-96	50	70
69-12	50	65

69-28	50	55
69-44	45	50
69-60	35	50
69-76	35	55
69-92	35	65
70-08	35	65
70-24	35	65
70-40	35	55
70-58	45	55
70-72	50	55
70-88	50	50
71-04	50	45
71-20	50	45
71-36	50	50
71-52	45	45
71-68	45	55
71-84	55	65
72-00	55	65
72-16	70	65
72-32	70	75
72-48	75	85
72-64	75	85
72-80	75	90
72-96	85	95
73-12	90	100
73-28	90	110
73-44	90	115
73-60	90	120
73-76	90	115
73-92	90	115
74-08	110	115

74-24	100	100
74-40	100	110
74-56	100	110
74-72	95	115
74-88	95	120
75-04	95	125
75-20	95	135
75-36	100	135
75-52	100	140
75-68	100	140
75-84	100	140
76-00	110	135
76-16	100	125
76-32	100	125
76-48	100	125
76-64	110	125
76-80	115	125
76-96	120	125
77-12	120	125
77-28	120	135
77-44	110	125
77-60	100	125
77-76	120	135
77-92	120	125
78-03	120	125
78-24	115	125
78-40	115	120
78-56	115	120
78-72	110	120
78-88	100	120
79-04	100	120

79-20	95	120
79-36	95	120
79-52	95	125
79-68	95	125
79-84	100	120
80-00	95	125
80-16	95	125
80-32	95	125
80-48	100	120
80-64	100	125
80-80	100	125
80-96	110	125
81-12	115	135
81-28	110	140
81-44	115	140
81-60	110	140
81-76	115	140
81-92	110	140
82-08	110	140
82-24	110	135
82-40	110	135
82-56	100	125
87-72	110	125
82-88	110	125
83-04	100	125
83-20	100	120
83-36	100	125
83-52	100	120
83-68	100	135
83-84	95	140
84-00	100	135

84-16	110	140
84-32	110	140
84-48	110	140
84-64	110	140
84-80	120	155
84-96	115	145
85-12	115	155
85-28	120	160
85-44	120	165
85-60	120	160
85-76	125	165
85-92	135	160
86-08	135	160
86-24	125	155
86-40	125	155
86-56	120	145
86-72	120	145
86-98	110	140
87-04	110	140
87-20	110	140
87-36	110	140
87-52	110	140
87-68	100	135
87-84	100	135
88-00	100	135
88-16	100	125
88-32	110	120
88-48	115	120
88-64	110	120
88-80	110	125
88-96	100	125

89-12	100	125
89-28	95	125
89-44	95	125
89-60	100	120
89-76	100	135
89-92	110	140
90-08	110	135
90-24	110	140
90-40	100	145
90-56	100	155
90-72	110	155
90-88	110	155
91-04	100	155
91-20	110	155
91-36	110	160
91-52	115	160
91-68	110	155
91-84	115	155
92-00	115	140
92-16	115	155
92-32	120	155
92-48	125	145
92-64	125	155
92-80	125	155
92-96	120	155
93-12	120	145
93-28	120	145
93-44	115	145
93-60	120	145
93-76	115	140
93-92	115	140

94-08	115	140
94-24	115	140
94-40	115	140
94-56	115	140
94-72	115	135
94-88	115	135
95-04	110	135
95-20	110	135
95-36	110	135
95-52	115	135
95-68	100	140
95-84	95	135
96-00	100	125
96-16	95	125
96-32	95	125
96-48	95	125
96-64	110	125
96-80	95	120
96-96	95	120
97-12	95	120
97-28	95	110
97-44	100	115
97-60	110	120
97-76	110	115
97-92	100	115
98-08	95	115
98-24	100	115
98-40	95	115
98-52	100	115
98-72	100	110
98-88	110	100

99-04	95	95
99-20	90	100
99-36	90	100
93-52	75	110
99-68	75	115
99-84	75	115
100-00	75	110

Appendix 3

Set-value signals for the test-stand inspection of the driver's seat on
Category A (Class I) tractors (point 3.5.3.1.1)

PS	=	set point
a	=	amplitude of the required value signal in 10^{-4}m ,
t	=	measurement time in seconds

When the sequence of signals is repeated in the table for 701 points, points 700 and 0 coincide in time at an amplitude of $a = 0$:

PS No	a 10 ⁻⁴ m	t s
0	0000	0
1	0344	0.04
2	0333	0.08
3	0272	
4	0192	
5	0127	
6	0115	
7	0169	
8	0243	
9	0298	
10	0320	
11	0270	
12	0191	
13	0124	
14	0057	
15	0027	
16	0004	
17	-0013	
18	-0039	
19	-0055	
20	-0056	
21	-0059	
22	-0068	
23	-0104	
24	-0134	
25	-0147	1.0
26	-0144	
27	-0143	
28	-0155	

29	-0179	
30	-0181	
31	-0155	
32	-0139	
33	-0141	
34	-0170	
35	-0221	
36	-0259	
37	-0281	
38	-0268	
39	-0258	
40	-0285	
41	-0348	
42	-0437	
43	-0509	
44	-0547	
45	-0562	
46	-0550	
47	-0550	
48	-0576	
49	-0622	
50	-0669	2.0
51	-0689	
52	-0634	
53	-0542	
54	-0429	
55	-0314	
56	-0282	
57	-0308	
58	-0373	
59	-0446	

60	-0469	
61	-0465	
62	-0417	
63	-0352	
64	-0262	
65	-0211	
66	-0180	
67	-0182	
68	-0210	
69	-0222	
70	-0210	
71	-0186	
72	-0141	
73	-0088	
74	-0033	
75	0000	3.0
76	0001	
77	-0040	
78	-0098	
79	-0130	
80	-0115	
81	-0068	
82	-0036	
83	-0032	
84	-0050	
85	-0052	
86	-0039	
87	-0011	
88	0014	
89	0041	
90	0054	

91	0040	
92	0006	
93	-0000	
94	0025	
95	0065	
96	0076	
97	0054	
98	-0016	
99	-0066	
100	-0048	4.0
101	-0011	
102	0061	
103	0131	
104	0168	
105	0161	
106	0131	
107	0086	
108	0067	
109	0088	
110	0110	
111	0148	
112	0153	
113	0139	
114	0119	
115	0099	
116	0091	
117	0078	
118	0059	
119	0062	
120	0072	
121	0122	

122	0155	
123	0191	
124	0184	
125	0143	5.0
126	0087	
127	0029	
128	0010	
129	0025	
130	0074	
131	0106	
132	0115	
133	0090	
134	0048	
135	0038	
136	0066	
137	0116	
138	0180	
139	0229	
140	0212	
141	0157	
142	0097	
143	0055	
144	0073	
145	0175	
146	0287	
147	0380	
148	0406	
149	0338	
150	0238	6.0
151	0151	
152	0080	

153	0090	
154	0146	
155	0196	
156	0230	
157	0222	
158	0184	
159	0147	
160	0115	
161	0114	
162	0140	
163	0198	
164	0257	
165	0281	
166	0276	
167	0236	
168	0201	
169	0167	
170	0145	
171	0135	
172	0165	
173	0242	
174	0321	
175	0399	7·0
176	0411	
177	0373	
178	0281	
179	0179	
180	0109	
181	0094	
182	0136	
183	0206	

184	0271	
185	0267	
186	0203	
187	0091	
188	0009	
189	0006	
190	0074	
191	0186	
192	0280	
193	0342	
194	0330	
195	0265	
196	0184	
197	0118	
198	0105	
199	0128	
200	0174	8·0
201	0215	
202	0229	
203	0221	
204	0199	
205	0164	
206	0162	
207	0174	
208	0210	
209	0242	
210	0270	
211	0285	
212	0285	
213	0258	
214	0223	

215	0194	
216	0165	
217	0132	
218	0106	
219	0077	
220	0065	
221	0073	
222	0099	
223	0114	
224	0111	
225	0083	9·0
226	0026	
227	-0028	
228	-0052	
229	-0069	
230	-0077	
231	-0067	
232	-0095	
233	-0128	
234	-0137	
235	-0144	
236	-0131	
237	-0155	
238	-0208	
239	-0266	
240	-0285	
241	-0276	
242	-0205	
243	-0110	
244	-0020	
245	0041	

246	0053	
247	0020	
248	0016	
249	0041	
250	0090	10·0
251	0136	
252	0151	
253	0123	
254	0070	
255	0034	
256	-0001	
257	-0010	
258	-0031	
259	-0061	
260	-0086	
261	-0104	
262	-0103	
263	-0093	
264	-0074	
265	-0056	
266	-0039	
267	-0000	
268	0033	
269	0067	
270	0097	
271	0085	
272	0034	
273	0002	
274	-0050	
275	-0080	11·0
276	-0096	

277	-0121	
278	-0116	
279	-0092	
280	-0060	
281	-0018	
282	-0011	
283	-0052	
284	-0143	
285	-0241	
286	-0330	
287	-0343	
288	-0298	
289	-0235	
290	-0203	
291	-0249	
292	-0356	
293	-0448	
294	-0486	
295	-0444	
296	-0343	
297	-0240	
298	-0215	
299	-0277	
300	-0399	12·0
301	-0527	
302	-0585	
303	-0569	
304	-0479	
305	-0363	
306	-0296	
307	-0299	

308	-0374	
309	-0466	
310	-0528	
311	-0520	
312	-0432	
313	-0320	
314	-0244	
315	-0237	
316	-0310	
317	-0413	
318	-0462	
319	-0456	
320	-0351	
321	-0181	
322	-0045	
323	0013	
324	-0037	
325	-0160	13-0
326	-0247	
327	-0258	
328	-0187	
329	-0069	
330	0044	
331	0078	
332	0061	
333	-0012	
334	-0102	
335	-0127	
336	-0103	
337	-0045	
338	0039	

339	0094	
340	0107	
341	0058	
342	-0011	
343	-0078	
344	-0093	
345	-0068	
346	-0025	
347	0021	
348	0008	
349	-0016	
350	-0038	14-0
351	-0024	
352	0041	
353	0135	
354	0196	
355	0171	
356	0053	
357	-0111	
358	-0265	
359	-0348	
360	-0336	
361	-0258	
362	-0155	
363	-0059	
364	-0056	
365	-0123	
366	-0187	
367	-0218	
368	-0136	
369	0012	

370	0149	
371	0212	
372	0153	
373	0021	
374	-0104	
375	-0160	15-0
376	-0142	
377	-0027	
378	0099	
379	0186	
380	0174	
381	0085	
382	-0031	
383	-0086	
384	-0069	
385	0012	
386	0103	
387	0164	
388	0129	
389	0047	
390	-0055	
391	-0097	
392	-0056	
393	0043	
394	0162	
395	0220	
396	0205	
397	0129	
398	0053	
399	0022	
400	0052	16-0

401	0114	
402	0175	
403	0191	
404	0172	
405	0138	
406	0092	
407	0052	
408	0051	
409	0025	
410	0001	
411	-0026	
412	-0065	
413	-0073	
414	-0038	
415	-0001	
416	0029	
417	0030	
418	-0005	
419	-0045	
420	-0068	
421	-0093	
422	-0075	
423	-0067	
424	-0051	
425	-0049	17-0
426	-0059	
427	-0077	
428	-0107	
429	-0143	
430	-0141	
431	-0142	

432	-0106	
433	-0080	
434	-0050	
435	-0030	
436	-0014	
437	-0017	
438	-0031	
439	-0037	
440	-0068	
441	-0113	
442	-0167	
443	-0203	
444	-0191	
445	-0135	
446	-0047	
447	0028	
448	0032	
449	-0031	
450	-0108	18-0
451	-0157	
452	-0155	
453	-0081	
454	-0012	
455	0053	
456	0085	
457	0054	
458	0002	
459	-0026	
460	-0034	
461	-0014	
462	0031	

463	0061	
464	0098	
465	0123	
466	0103	
467	0078	
468	0046	
469	0042	
470	0044	
471	0072	
472	0109	
473	0133	
474	0138	
475	0125	19-0
476	0095	
477	0105	
478	0129	
479	0181	
480	0206	
481	0200	
482	0168	
483	0140	
484	0149	
485	0186	
486	0237	
487	0242	
488	0207	
489	0130	
490	0055	
491	0015	
492	0014	
493	0036	

494	0054	
495	0056	
496	0022	
497	-0032	
498	-0076	
499	-0108	
500	-0099	20-0
501	-0029	
502	0051	
503	0138	
504	0199	
505	0213	
506	0184	
507	0139	
508	0062	
509	0027	
510	0030	
511	0067	
512	0146	
513	0247	
514	0314	
515	0330	
516	0289	
517	0224	
518	0179	
519	0184	
520	0216	
521	0229	
522	0210	
523	0130	
524	0062	

525	0006	21-0
526	-0004	
527	0004	
528	0018	
529	0031	
530	0020	
531	0014	
532	-0011	
533	-0022	
534	-0029	
535	-0042	
536	-0066	
537	-0120	
538	-0188	
539	-0241	
540	-0252	
541	-0243	
542	-0212	
543	-0183	
544	-0170	
545	-0189	
546	-0233	
547	-0286	
548	-0311	
549	-0280	
550	-0215	22-0
551	-0128	
552	-0038	
553	-0018	
554	-0024	
555	-0052	

556	-0055	
557	-0033	
558	0013	
559	0061	
560	0079	
561	0060	
562	0024	
563	-0013	
564	-0027	
565	-0018	
566	0011	
567	0064	
568	0111	
569	0171	
570	0238	
571	0285	
572	0295	
573	0261	
574	0201	
575	0145	23-0
576	0142	
577	0163	
578	0222	
579	0284	
580	0334	
581	0342	
582	0301	
583	0240	
584	0205	
585	0216	
586	0257	

587	0326	
588	0363	
589	0380	
590	0358	
591	0303	
592	0273	
593	0341	
594	0249	
595	0252	
596	0245	
597	0244	
598	0225	
599	0212	
600	0180	24-0
601	0160	
602	0130	
603	0118	
604	0104	
605	0081	
606	0040	
607	-0004	
608	-0040	
609	-0057	
610	-0049	
611	-0021	
612	0011	
613	0033	
614	0038	
615	0027	
616	0019	
617	0024	

618	0040	
619	0069	
620	0082	
621	0086	
622	0068	
623	0056	
624	0036	
625	0006	25·0
626	-0015	
627	-0049	
628	-0071	
629	-0075	
630	-0078	
631	-0074	
632	-0069	
633	-0094	
634	-0116	
635	-0150	
636	-0178	
637	-0188	
638	-0198	
639	-0194	
640	-0187	
641	-0170	
642	-0161	
643	-0154	
644	-0140	
645	-0115	
646	-0055	
647	0001	
648	0049	

649	0085	
650	0094	26·0
651	0071	
652	0039	
653	-0001	
654	-0027	
655	-0025	
656	0000	
657	0028	
658	0045	
659	0019	
660	-0032	
661	-0101	
662	-0162	
663	-0198	
664	-0193	
665	-0149	
666	-0096	
667	-0075	
668	-0086	
669	-0151	
670	-0246	
671	-0329	
672	-0382	
673	-0392	
674	-0340	
675	-0286	27·0
676	-0249	
677	-0245	
678	-0298	
679	-0348	

680	-0366	
681	-0330	
682	-0247	
683	-0175	
684	-0135	
685	-0149	
686	-0165	
687	-0178	
688	-0142	
689	-0097	
690	-0067	
691	-0051	
692	-0071	
693	-0101	
694	-0110	
695	-0091	
696	-0043	
697	0020	
698	0061	
699	0064	
700	0036	28·0

Appendix 4a

Set-value signals for the test-stand inspection of the driver's seat on
Category A (Class II) tractors (point 3.5.3.1.1)

PS	=	set point
a	=	amplitude of the required value signal in 10^{-4}m
t	=	measurement time in seconds

When the sequence of signals is repeated in the table for 701 points, points 700 and 0 coincide in time at an amplitude of $a = 0$:

PS No	a 10 ⁻⁴ m	t s
0	0000	0
1	0156	0.04
2	0147	0.08
3	0144	
4	0162	
5	0210	
6	0272	
7	0336	
8	0382	
9	0404	
10	0408	
11	0376	
12	0324	
13	0275	
14	0226	
15	0176	
16	0141	
17	0126	
18	0144	
19	0180	
20	0205	
21	0198	
22	0184	
23	0138	
24	0102	
25	0068	1.0
26	0050	
27	0055	
28	0078	

29	0120	
30	0184	
31	0209	
32	0224	
33	0206	
34	0157	
35	0101	
36	0049	
37	-0002	
38	-0038	
39	-0068	
40	-0088	
41	-0100	
42	-0110	
43	-0151	
44	-0183	
45	-0234	
46	-0303	
47	-0364	
48	-0410	
49	-0407	
50	-0367	2.0
51	-0289	
52	-0180	
53	-0081	
54	-0000	
55	-0011	
56	-0070	
57	-0168	
58	-0256	
59	-0307	

60	-0302	
61	-0249	
62	-0157	
63	-0056	
64	0013	
65	0044	
66	0025	
67	-0026	
68	-0077	
69	-0115	
70	-0131	
71	-0102	
72	-0031	
73	0035	
74	0078	
75	0057	3.0
76	0000	
77	-0069	
78	-0124	
79	-0143	
80	-0129	
81	-0091	
82	-0045	
83	-0004	
84	-0004	
85	-0016	
86	-0047	
87	-0080	
88	-0083	
89	-0080	
90	-0060	

91	-0029	
92	-0013	
93	-0004	
94	-0039	
95	-0100	
96	-0171	
97	-0218	
98	-0226	
99	-0190	
100	-0116	4.0
101	-0054	
102	-0001	
103	-0001	
104	-0045	
105	-0126	
106	-0191	
107	-0223	
108	-0206	
109	-0168	
110	-0122	
111	-0095	
112	-0101	
113	-0114	
114	-0161	
115	-0212	
116	-0254	
117	-0273	
118	-0258	
119	-0211	
120	-0169	
121	-0125	

122	-0115	
123	-0127	
124	-0156	
125	-0185	5.0
126	-0232	
127	-0256	
128	-0260	
129	-0260	
130	-0247	
131	-0228	
132	-0204	
133	-0192	
134	-0179	
135	-0144	
136	-0128	
137	-0117	
138	-0131	
139	-0154	
140	-0164	
141	-0160	
142	-0128	
143	-0059	
144	0015	
145	0074	
146	0034	
147	0042	
148	-0034	
149	-0101	
150	-0147	6.0
151	-0141	
152	-0091	

153	-0031	
154	0017	
155	0027	
156	-0012	
157	-0058	
158	-0127	
159	-0151	
160	-0125	
161	-0049	
162	0045	
163	0104	
164	0122	
165	0104	
166	0046	
167	-0018	
168	-0047	
169	-0036	
170	0016	
171	0145	
172	0257	
173	0330	
174	0330	
175	0258	7·0
176	0138	
177	0034	
178	-0037	
179	-0030	
180	0026	
181	0141	
182	0216	
183	0243	

184	0188	
185	0079	
186	-0015	
187	-0047	
188	-0008	
189	0091	
190	0230	
191	0340	
192	0381	
193	0332	
194	0225	
195	0099	
196	0014	
197	-0012	
198	0033	
199	0131	
200	0247	8·0
201	0335	
202	0348	
203	0314	
204	0239	
205	0161	
206	0124	
207	0139	
208	0218	
209	0328	
210	0405	
211	0426	
212	0403	
213	0314	
214	0191	

215	0088	
216	0025	
217	0030	
218	0087	
219	0173	
220	0240	
221	0274	
222	0250	
223	0182	
224	0077	
225	-0019	9·0
226	-0075	
227	-0061	
228	-0033	
229	0011	
230	0042	
231	0025	
232	-0021	
233	-0078	
234	-0142	
235	-0197	
236	-0225	
237	-0217	
238	-0196	
239	-0133	
240	-0038	
241	0052	
242	0128	
243	0168	
244	0164	
245	0169	

246	0170	
247	0188	
248	0210	
249	0220	
250	0210	10·0
251	0185	
252	0149	
253	0100	
254	0057	
255	0035	
256	0006	
257	-0000	
258	0010	
259	0034	
260	0047	
261	0047	
262	0031	
263	0028	
264	0036	
265	0072	
266	0125	
267	0188	
268	0216	
269	0189	
270	0119	
271	0031	
272	-0026	
273	-0059	
274	-0052	
275	-0009	11·0
276	0039	

277	0081	
278	0107	
279	0079	
280	0023	
281	-0044	
282	-0121	
283	-0168	
284	-0172	
285	-0147	
286	-0119	
287	-0114	
288	-0155	
289	-0217	
290	-0287	
291	-0243	
292	-0341	
293	-0289	
294	-0217	
295	-0157	
296	-0150	
297	-0193	
298	-0248	
299	-0319	
300	-0371	12·0
301	-0378	
302	-0354	
303	-0309	
304	-0264	
305	-0241	
306	-0236	
307	-0264	

308	-0262	
309	-0282	
310	-0275	
311	-0278	
312	-0285	
313	-0302	
314	-0318	
315	-0316	
316	-0293	
317	-0238	
318	-0154	
319	-0070	
320	-0021	
321	-0029	
322	-0075	
323	-0138	
324	-0189	
325	-0193	13-0
326	-0153	
327	-0095	
328	-0012	
329	0033	
330	0069	
331	0064	
332	0000	
333	-0074	
334	-0147	
335	-0164	
336	-0142	
337	-0067	
338	-0001	

339	0057	
340	0080	
341	0040	
342	-0010	
343	-0096	
344	-0148	
345	-0164	
346	-0134	
347	-0060	
348	0038	
349	0136	
350	0195	14-0
351	0170	
352	0077	
353	-0067	
354	-0212	
355	-0321	
356	-0356	
357	-0339	
358	-0277	
359	-0189	
360	-0119	
361	-0100	
362	-0124	
363	-0170	14-0
364	-0193	
365	-0173	
366	-0105	
367	-0000	
368	0075	
369	0092	

370	0074	
371	0011	
372	-0049	
373	-0082	
374	-0076	
375	-0039	15-0
376	0010	
377	0053	
378	0078	
379	0068	
380	0033	
381	0004	
382	-0000	
383	-0013	
384	-0003	
385	0000	
386	-0001	
387	-0010	
388	-0023	
389	-0019	
390	0014	
391	0060	
392	0093	
393	0117	
394	0137	
395	0123	
396	0098	
397	0075	
398	0055	
399	0062	
400	0087	16-0

401	0113	
402	0126	
403	0139	
404	0119	
405	0080	
406	0023	
407	-0043	
408	-0099	
409	-0121	
410	-0090	
411	-0009	
412	0072	
413	0120	
414	0111	
415	0049	
416	-0021	
417	-0098	
418	-0136	
419	-0117	
420	-0072	
421	-0020	
422	0038	
423	0061	
424	0026	
425	-0016	17-0
426	-0090	
427	-0151	
428	-0171	
429	-0150	
430	-0080	
431	-0001	

432	0064	
433	0113	
434	0109	
435	0089	
436	0016	
437	-0040	
438	-0098	
439	-0142	
440	-0147	

PS No	a 10 ⁻⁴ m	t s
441	-0112	
442	-0028	
443	0058	
444	0118	
445	0124	
446	0080	
447	0006	
448	-0052	
449	-0068	
450	-0050	18·0
451	-0000	
452	0063	
453	0129	
454	0155	
455	0156	
456	0111	
457	0069	
458	0049	
459	0036	
460	0056	
461	0100	
462	0143	
463	0178	
464	0193	
465	0178	
466	0136	
467	0087	
468	0050	
469	0041	

470	0067	
471	0117	
472	0165	
473	0188	
474	0178	
475	0171	19·0
476	0154	
477	0141	
478	0137	
479	0146	
480	0177	
481	0231	
482	0282	
483	0314	
484	0287	
485	0222	
486	0138	
487	0050	
488	-0003	
489	0001	
490	0041	
491	0095	
492	0124	
493	0112	
494	0060	
495	-0022	
496	-0112	
497	-0161	
498	-0153	
499	-0087	
500	0030	20·0

501	0127	
502	0197	
503	0203	
504	0147	
505	0060	
506	-0027	
507	-0103	
508	-0096	
509	-0026	
510	0062	
511	0198	
512	0275	
513	0293	
514	0244	
515	0149	
516	0056	
517	0005	
518	-0001	
519	0023	
520	0035	
521	0063	
522	0034	
523	-0009	
524	-0074	
525	-0154	21·0
526	-0203	
527	-0204	
528	-0167	
529	-0119	
530	-0077	
531	-0068	

532	-0094	
533	-0168	
534	-0254	
535	-0337	
536	-0383	
537	-0400	
538	-0391	
539	-0365	
540	-0346	
541	-0342	
542	-0372	
543	-0398	
544	-0431	
545	-0464	
546	-0459	
547	-0425	
548	-0354	
549	-0259	
550	-0187	22·0
551	-0174	
552	-0182	
553	-0211	
554	-0241	
555	-0228	
556	-0192	
557	-0131	
558	-0066	
559	-0050	
560	-0065	
561	-0117	
562	-0164	

563	-0191	
564	-0165	
565	-0109	
566	-0025	
567	0081	
568	0163	
569	0191	
570	0164	
571	0089	
572	-0004	
573	-0075	
574	-0099	
575	-0054	23·0
576	0024	
577	0126	
578	0203	
579	0223	
580	0200	
581	0113	
582	0026	
583	-0008	
584	-0003	
585	0057	
586	0149	
587	0236	
588	0290	
589	0299	
590	0244	
591	0192	
592	0145	
593	0095	

594	0090	
595	0111	
596	0151	
597	0186	
598	0185	
599	0165	
600	0120	24·0
601	0057	
602	0008	
603	-0022	
604	-0044	
605	-0062	
606	-0070	
607	-0061	
608	-0057	
609	-0044	
610	-0040	
611	-0037	
612	-0028	
613	-0017	
614	-0006	
615	0011	
616	0032	
617	0045	
618	0050	
619	0039	
620	0036	
621	0027	
622	0025	
623	0006	
624	0000	

625	-0012	25·0
626	-0040	
627	-0047	
628	-0058	
629	-0070	
630	-0076	
631	-0098	
632	-0103	
633	-0127	
634	-0158	
635	-0158	
636	-0163	
637	-0182	
638	-0177	
639	-0184	
640	-0201	
641	-0199	
642	-0187	
643	-0145	
644	-0092	
645	-0040	
646	0017	
647	0044	
648	0061	
649	0029	
650	-0018	26·0
651	-0078	
652	-0129	
653	-0135	
654	-0110	
655	-0039	

656	0008	
657	0019	
658	-0033	
659	-0102	
660	-0194	
661	-0264	
662	-0292	
663	-0261	
664	-0210	
665	-0147	
666	-0092	
667	-0089	
668	-0138	
669	-0248	
670	-0360	
671	-0455	
672	-0497	
673	-0473	
674	-0393	
675	-0294	27·0
676	-0230	
677	-0214	
678	-0241	
679	-0294	
680	-0343	
681	-0375	
682	-0379	
683	-0349	
684	-0276	
685	-0202	
686	-0136	

687	-0099	
688	-0101	
689	-0139	
690	-0196	
691	-0246	
692	-0256	
693	-0234	
694	-0156	
695	-0078	
696	0015	
697	0083	
698	0118	
699	0080	
700	0000	31·0

Appendix 4b

Set-value signals for the test-stand testing of drivers' seats for category A tractors in class III (point 3.5.3.1.1)

PS	=	set point
a	=	amplitude of the set value signal in mm
t	=	measurement time in seconds

If the signal sequence is repeated for 701 points in the table, point 700 and 0 merge in time, with amplitude $a = 0$.

PS No	a mm	t s	30	- 2	0,794	61	- 4	1,642	92	- 15	2,491	123	- 18	3,339
			31	- 0	0,821	62	6	1,670	93	- 8	2,518	124	- 13	3,367
1	0	0,000	32	2	0,848	63	6	1,697	94	- 0	2,545	125	- 6	3,396
2	- 3	0,027	33	4	0,876	64	11	1,724	95	7	2,573	126	2	3,421
3	- 0	0,055	34	6	0,903	65	15	1,752	96	14	2,600	127	10	3,449
4	2	0,082	35	6	0,931	66	16	1,779	97	19	2,628	128	16	3,476
5	4	0,109	36	6	0,958	67	14	1,806	98	21	2,655	129	21	3,503
6	6	0,137	37	4	0,985	68	11	1,834	99	19	2,662	130	22	3,531
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8	5	0,192	39	- 1	1,040	70	- 1	1,869	101	7	2,737	132	15	3,586
9	3	0,219	40	- 4	1,067	71	- 8	1,916	102	- 0	2,764	133	8	3,613
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11	- 0	0,274	42	- 8	1,122	73	- 18	1,971	104	- 15	2,819	135	- 8	3,668
12	- 2	0,301	43	- 8	1,150	74	- 19	1,998	105	- 19	2,847	136	- 15	3,695
13	- 4	0,328	44	- 7	1,177	75	- 17	2,025	106	- 20	2,874	137	- 20	3,722
14	- 4	0,356	45	- 4	1,204	76	- 13	2,053	107	- 18	2,901	138	- 23	3,750
15	- 4	0,383	46	- 1	1,232	77	- 6	2,080	108	- 13	2,929	139	- 22	3,777
16	- 2	0,411	47	2	1,259	78	0	2,108	109	- 5	2,956	140	- 18	3,804
17	- 1	0,439	48	6	1,286	79	8	2,135	110	2	2,983	141	- 11	3,832
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19	2	0,493	50	10	1,341	81	19	2,190	112	16	3,038	143	5	3,887
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169	-11	4,598	200	7	5,447	231	16	6,295	262	5	7,144	293	-17	7,992
170	-14	4,626	201	3	5,474	232	17	6,323	263	14	7,171	294	-9	8,020
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173	-11	4,708	204	-9	5,556	235	9	6,405	266	26	7,253	297	14	8,102
174	-6	4,735	205	-12	5,584	236	3	6,432	267	23	7,281	298	20	8,129
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177	8	4,817	208	-12	5,666	239	-15	6,514	270	-1	7,363	301	19	8,211
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472	- 10	12,891	503	- 1	13,740	534	4	14,598	565	6	15,437	596	- 3	16,285
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477	3	13,028	508	1	13,877	539	- 0	14,725	570	14	15,574	601	17	16,422
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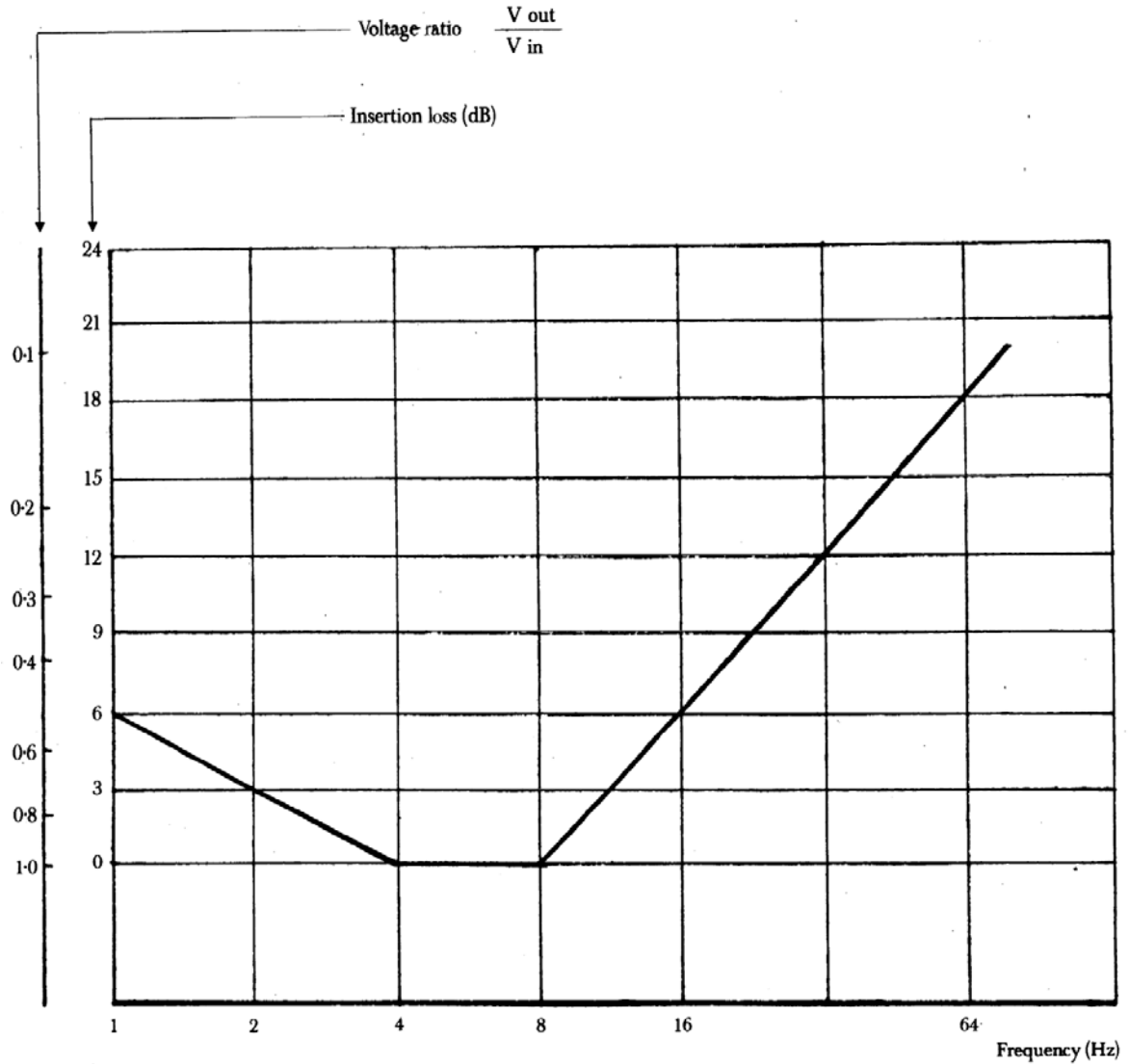
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621	8	16,970	652	1	17,818	683	10	18,667	714	- 5	19,515	745	6	20,354
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626	- 14	17,107	657	- 0	17,955	688	- 11	18,804	719	- 3	19,652	750	- 10	20,500
627	- 15	17,134	658	- 0	17,982	689	- 13	18,831	720	0	19,679	751	- 9	20,526
628	- 14	17,161	659	0	18,010	690	- 13	18,858	721	3	19,707	752	- 7	20,556
629	- 11	17,189	660	1	18,037	691	- 10	18,886	722	7	19,734	753	- 4	20,583
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930	- 13	25,427	961	2	26,276	992	2	27,124	1023	- 8	27,973
931	- 12	25,455	962	0	26,303	993	6	27,152	1024	0	28,000
932	- 9	25,482	963	- 2	26,330	994	10	27,179			
933	- 5	25,509	964	- 4	26,358	995	12	27,206			
934	- 0	25,537	965	- 5	26,385	996	14	27,234			
935	4	25,564	966	- 6	26,413	997	13	27,261			
936	8	25,591	967	- 7	26,440	998	11	27,288			
937	11	25,619	968	- 7	26,467	999	8	27,316			
938	13	25,645	969	- 7	26,495	1000	3	27,343			
939	13	25,674	970	- 6	26,522	1001	- 0	27,370			
940	11	25,701	971	- 4	26,549	1002	- 5	27,399			
941	7	25,728	972	- 2	26,577	1003	- 9	27,426			
942	3	25,756	973	0	26,604	1004	- 12	27,453			
943	- 1	25,783	974	3	26,631	1005	- 13	27,480			
944	- 5	25,810	975	6	26,659	1006	- 13	27,507			
945	- 8	25,839	976	9	26,686	1007	- 11	27,535			
946	- 10	25,855	977	10	26,714	1008	- 7	27,562			
947	- 11	25,892	978	11	26,741	1009	- 2	27,589			
948	- 10	25,920	979	10	26,768	1010	1	27,617			
949	- 8	25,947	980	8	26,796	1011	6	27,644			
950	- 6	25,975	981	5	26,823	1012	9	27,672			
951	- 2	26,002	982	1	26,850	1013	11	27,699			
952	0	26,029	983	- 3	26,878	1014	12	27,726			
953	3	26,057	984	- 7	26,905	1015	10	27,754			
954	5	26,084	985	- 10	26,933	1016	8	27,781			
955	7	26,111	986	- 12	26,960	1017	4	27,808			
956	8	26,139	987	- 13	26,987	1018	0	27,836			
957	8	26,166	988	- 12	27,015	1019	- 3	27,863			
958	7	26,194	989	- 10	27,042	1020	- 6	27,891			
959	6	26,221	990	- 6	27,069	1021	- 8	27,918			
960	4	26,248	991	- 2	27,097	1022	- 9	27,945			

Appendix 6

Characteristic of the filter of the vibration measuring instrument (point 2.5.3.3.5)



Appendix 7

Driver's seat installation requirements for EU type-approval of a tractor

1. Every driver's seat with suspension system must bear the EU component type-approval mark and comply with the following installation requirements:
 - 1.1. the driver's seat must be installed in such a way that:
 - 1.1.1. the driver is assured of a comfortable position for driving and manoeuvring the tractor;
 - 1.1.2. the seat is easily accessible;
 - 1.1.3. the driver, when seated in the normal driving position, can easily reach the various control devices of the tractor that are likely to be actuated during operation;
 - 1.1.4. no part of any of the seat or tractor components is likely to cause the driver to suffer cuts or bruises;
 - 1.1.5. where the position of the seat is adjustable only lengthwise and vertically, the longitudinal axis passing through the Seat Reference Point (S) shall be parallel with the vertical longitudinal plane of the tractor passing through the centre of the steering wheel and not more than 100 mm from that plane.
 - 1.1.6. where the seat is designed to revolve round a vertical axis it must be capable of being locked in all or certain positions and in any case in the position mentioned in point 1.1.5.
 2. The holder of the EU type-approval may request that it be extended to other types of seat. The competent authorities must grant this extension on the following conditions:
 - 2.1. the new type of seat has received EU component type-approval;
 - 2.2. it has been designed to be installed on the type of tractor for which the extension of the EU type-approval has been requested;
 - 2.3. it is installed in such a manner as to comply with the installation requirements in this Annex.
 3. Seats intended for tractors with a minimum rear-wheel track of not more than 1 150 mm may have the following minimum dimensions in respect of the depth and width of the seat surface:
 - depth of seat surface: 300 mm;
 - width of seat surface: 400 mm.

This provision is applicable only if the values specified for the depth and the width of the seat surface (i.e. 400 ± 50 mm and at least 450 mm respectively) cannot be adhered to on grounds relating to the tractor.

Appendix 8

Method for determining the seat reference point (S)

1.

Device for determining the seat reference point (S)

The device illustrated in Figure 1 consists of a seat pan board and backrest boards. The lower backrest boards must be hinged in the region of the ischium humps (A) and the loin (B), the hinge (B) being adjustable in height.

2.

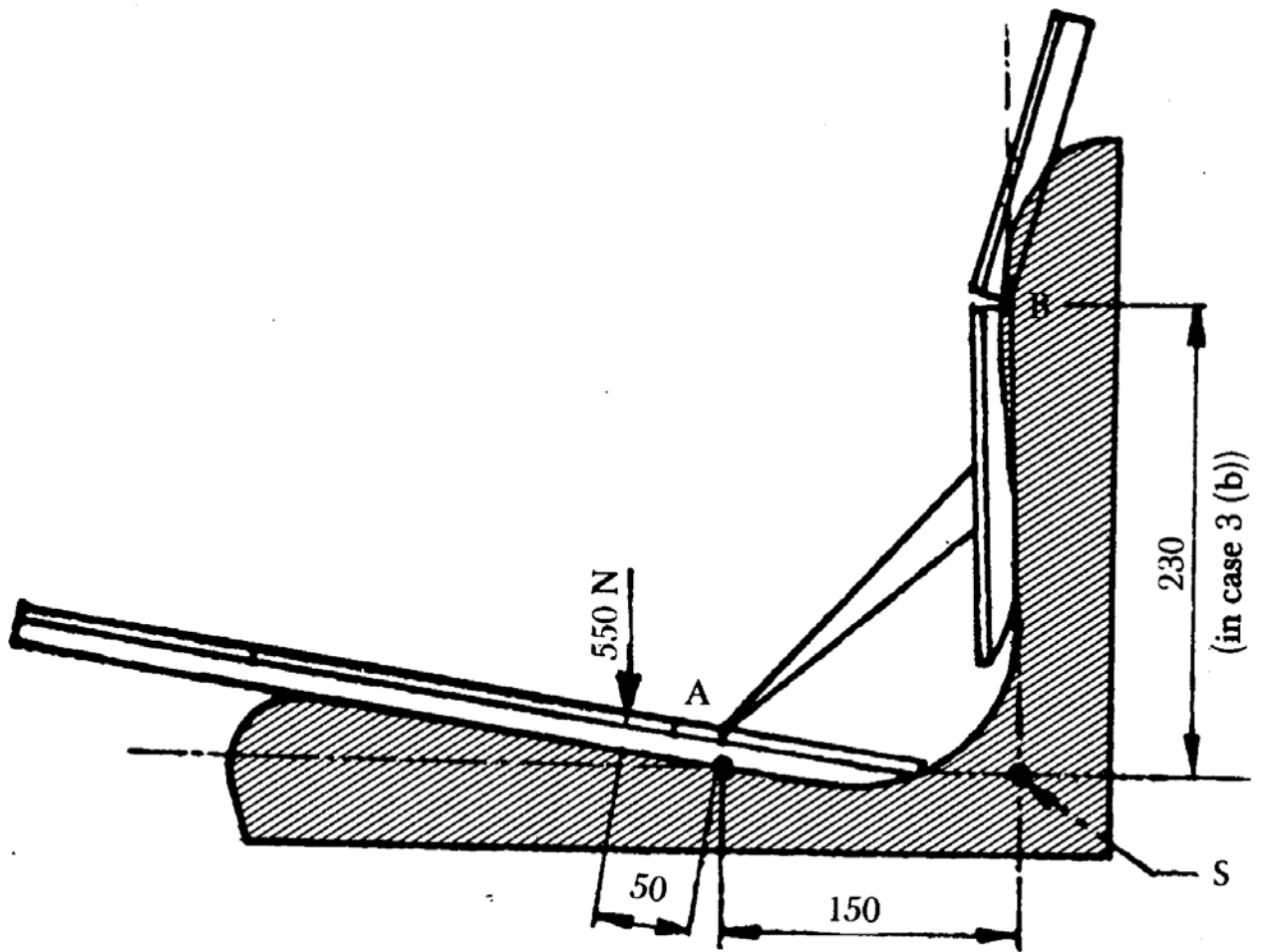
Method of determining the seat reference point (S)

The seat reference point (S) must be obtained by using the device illustrated in Figures 1 and 2, which simulates loading by a human occupant. The device must be positioned on the seat. It must then be loaded with a force of 550 N at a point 50 mm in front of hinge (A) and two parts of the backrest lightly pressed tangentially against the padded backrest.

If it is not possible to determine definite tangents to each area of the padded backrest (below and above the lumbar region) the following procedure must be adopted:

(a) where there is no possibility of defining the tangent to the lowest possible area, the lower part of the backrest board in a vertical position must be lightly pressed against the padded backrest;

(b) where there is no possibility of defining the tangent to the highest possible area, if the lower part of the backrest board is vertical, the hinge must be fixed at a height of 230 mm above the seat reference point (S). The two parts of the backrest board in a vertical position must then be lightly pressed tangentially against the padded backrest.



- Figure 2 -

Device in position