
?a Yh'g_]']b'[cnXUfg_]g'fc'!'9bccgb]'fU_hcf'g'df_]`'f Yb]a 'dfY_cdUb]_ca ž
a c'cfb]'dfY_cdUb]_]']b'a c'cfb]'dfY_cdUb]_]g'dc[cbg_]a fU'c`Ygca fU'!'JUfbcgh

Agricultural and forestry machinery - Pedestrian controlled tractors with mounted rotary cultivators, motor hoes, motor hoes with drive wheel(s) - Safety

Ta slovenski standard je istoveten z: EN 709:1997/prA2

ICS:

65.060.10	Kmetijski traktorji in prikolice	Agricultural tractors and trailed vehicles
65.060.20	Oprema za obdelovanje tal	Soil-working equipment

SIST EN 709:1998/oprA2:2007 en

ICS 65.060.10; 65.060.20

English Version

**Agricultural and forestry machinery - Pedestrian controlled
tractors with mounted rotary cultivators, motor hoes, motor hoes
with drive wheel(s) - Safety**

Matériels agricoles et forestiers - Motoculteurs avec fraises
portées, motobineuses et fraises à roue(s) motrice(s) -
Sécurité

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 144.

This draft amendment A2, if approved, will modify the European Standard EN 709:1997. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents		Page
Foreword.....		3
1	Modification to Clause 3	4
2	Modification to Clause 5.3	4
4	Modification to Clause 5.5	4
5	Modification to Clause 5.11	6
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EC Directive 2006/42/EC, Machinery Directive.....		10

Foreword

This document (EN 709:1997/prA2:2007) has been prepared by Technical Committee CEN/TC 144 “Tractors and machinery for agriculture and forestry”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

For relationship with EC Directive(s), see informative Annex ZA, which is an integral part of this document.

1 Modification to Clause 3

Add the following new definition:

"3.7

maximum operating engine speed

highest engine speed obtainable when adjusted in accordance with the machine manufacturer's specifications and/or instructions with the tools engaged

NOTE Adapted from EN 836:1997 and EN 12733:2001."

2 Modification to Clause 5.3

Between the 3rd and the last paragraph, add the following text:

"An engine stopping device shall be provided."

4 Modification to Clause 5.5

At the end of the 1st paragraph add the following text and the new Figure 3 and Figure 4 and renumber the following figures:

"Releasing the hold-to-run control(s) shall not stop the engine. For electrical powered machines, this requirement does not apply.

The force required to maintain the hold-to-run control in engaged position shall not exceed 25 N when the hold-to-run control is located on only one handlebar.

If the hold-to-run control is located so that it can be operated by either, or both, hands when they are holding the handle-grips the force required to maintain the hold-to-run control in the engaged position shall not exceed 30 N.

The measuring of these values shall be carried out with the following method:

The Measurement shall be performed with a device having an accuracy of $\pm 0,5\%$ (e.g. dynamometer) with the engine stopped. The force (F) required to maintain the hold-to-run control shall be measured at 10 mm from the end of the hold-to-run control. The hold-to-run control is pressed on the handlebar/handle-grips, see Figure 3.

NOTE The values of 25 N and 30 N are under evaluation by WG 4.

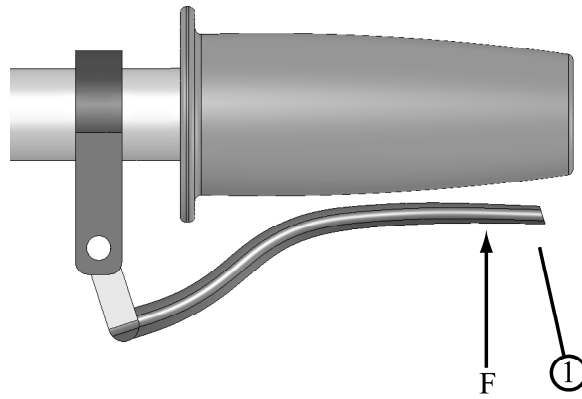


Figure 3a

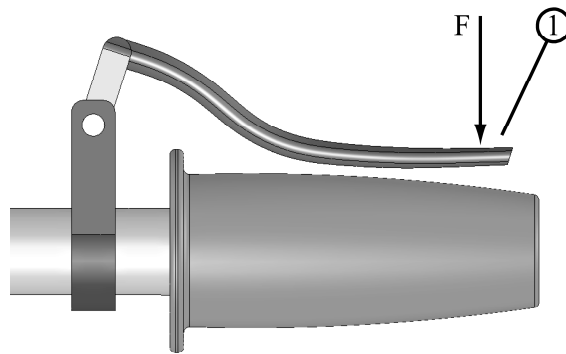


Figure 3b

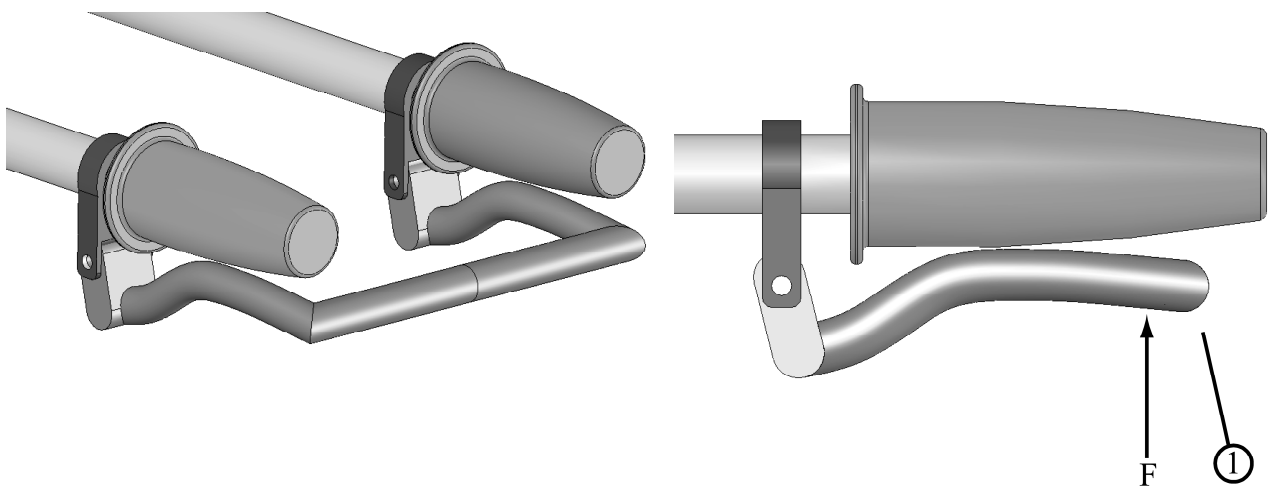


Figure 3c

Key

- ① free end of the hold-to-run control
- F force required to maintain the hold-to-run control

Figure 3 – Locations of the force F

The hold-to-run control shall be designed or guarded so that the tool or wheels can not move without intentional action (e.g. a manual control requiring two different action to be operated). This requirement shall be verified by functional test. This requirement shall not be applied if the hold-to-run control is located below the handle-grip (see Figure 4).

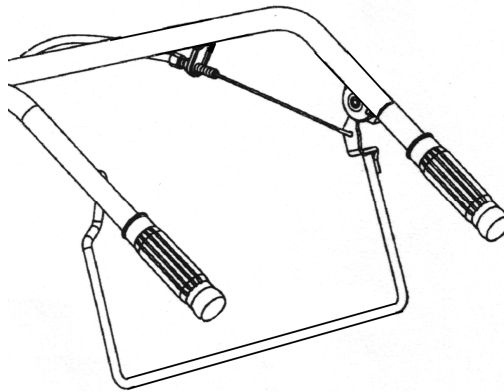


Figure 4 – Example of hold-to-run control located below the handle-grip"

5 Modification to Clause 5.11

Delete 5.11 and replace with the following text:

"5.11.1 General

For pedestrian controlled tractors a service and parking brake systems shall be provided to stop the pedestrian controlled tractor's motion in both forward and reverse directions, if a force of more than 250 N, applied at the centre of the wheel axle and parallel to the slope, is required to hold the pedestrian controlled tractor, with the tool touching the ground, on a 30 % (16,7°) slope.

NOTE The 250 N value is under evaluation by WG 4.

Service and parking brake systems shall be tested in accordance with 5.11.2 and 5.11.3.

For the test the pedestrian controlled tractor shall be equipped with the tyres recommended by the manufacturer having the least tread area in contact with the test surface.

If steering-assist brakes are also used for service brakes, it shall be possible to connect them in a way that they apply both brakes with equal force.

If the pedestrian controlled tractor is equipped with steering brakes, these shall be capable of being combined or activated simultaneously.

5.11.2 Service brake

5.11.2.1 Performance requirements

The pedestrian controlled tractor shall be equipped with a means capable of stopping its motion in both forward and reverse directions within a braking distance of 0,19 m for each 1 km/h of speed, when tested in accordance with 5.11.2.2.

5.11.2.2 Test method

Test stops shall be conducted on a substantially level (not to exceed 1 % gradient) dry, smooth, hard surface roadway of concrete (or equivalent test surface).

When testing a pedestrian controlled tractor with separate clutch and brake control means, the clutch shall be simultaneously disengaged with brake engagement.

The test shall be carried out in both forward and reverse directions at the maximum ground speed attainable.

Five test stops shall be carried out and the result is the mean of the five stopping distances.

5.11.3 Parking brake

5.11.3.1 General requirements

A parking brake shall be provided on pedestrian controlled tractors requiring a service brake.

The parking brake, whether hand-operated or not, may be in combination with the service brake.

An automatic parking brake, when provided, shall be activated when the transmission hold-to-run control is released.

5.11.3.2 Performance requirements

The parking brake shall hold the pedestrian controlled tractor stationary facing both uphill and downhill, on a 30 % (16,7°) slope when tested in accordance with 5.11.3.3. The force required to engaged and unlock the brake shall not exceed 220 N.

5.11.3.3 Test method

Test equipment and condition: The test shall be conducted on 30 % (16,7°) slope with a coefficient of friction such that the pedestrian controlled tractor does not slide down the slope .

The transmission shall be in neutral, the traction clutch disengaged and the engine off.

Test procedure: The pedestrian controlled tractor shall be positioned on the test slope with its parking brake engaged and locked. The pedestrian controlled tractor shall be tested both with its front downhill and its rear downhill.

Test acceptance: The pedestrian controlled tractor shall not move."

Add:

"5.15 Tool stopping

5.15.1 Tool stopping time

The tool of pedestrian controlled tractor shall stop from their maximum rotational speed within 1 s after the operator releases the hold-to-run control.

The tool of motor hoes shall stop from their maximum rotational speed within 2 s after the operator releases the hold-to-run control.

NOTE The tool stopping time for motor hoes is under evaluation by WG 4.

The stopping time of the tool shall be measured according to clause 5.15.2.

For those machines that rely on the presence of a device (e.g. brake) to achieve the stopping time of the tools test cycles according to clause 5.15.3 shall be carried out.