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COUNCIL

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Council

**DECISION OF THE COUNCIL AMENDING THE DECISION ESTABLISHING
THE OECD STANDARD CODES FOR THE OFFICIAL TESTING OF
AGRICULTURAL TRACTORS**

**(adopted by the Council on 3 March 1999 under the written procedure
[C/M(99)5/PROV])**

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THE COUNCIL,

Having regard to Article 5 a) and c) of the Convention on the Organisation for Economic Co-operation and Development of 14 December 1960;

Having regard to the Decision of the Council of 24 November 1987 Establishing the OECD Standard Codes for the Official Testing of Agricultural Tractors [C(87)53(Final)], as amended;

On the proposal of the Committee for Agriculture;

DECIDES:

Annexes I, II, and IV (Codes 1, 2, and 4) shall be amended as attached(*).

(*) Page and paragraph numbers refer to the 1998 updated version of the Codes (“Yellow” Codes, Volume I and Volume II).

I. MODIFICATION OF CODES 1 and 2

Code 1 and Code 2 shall be modified as follows:

Code 1 page 37,

Code 2 page 89, paragraph 2.2.1.3 shall read:

“2.2.1.3 Test at full load and varying speed

The hourly fuel consumption, torque and power are measured as a function of speed. To plot the curves, the test shall go down to an engine speed at least 15 per cent below the speed at which maximum torque occurs **or to an engine speed at least 50 per cent of rated engine speed, whichever speed is lower. This is subject to any limitations such as safe operation of the tractor and test equipment or as stated by the manufacturer in agreement with the test station.**”

Code 1 page 38,

Code 2 page 91, paragraph 2.2.1.7 shall read:

“2.2.1.7 Special cases of tractors with a power take-off unable to transmit the full power from the engine

The foregoing tests at the main power take-off are made when the total available power may be transmitted by the main power outlets.

If this is not the case the tractor engine must be tested as shown in 2.2.1.8 below **or an additional series of drawbar performance tests must be made as described in section 2.2.3.6. The choice between the two methods shall be made by the testing station in agreement with the manufacturer.**

In addition, the power take-off shall be tested, distinguishing between the type of coupling:”

[Sections 2.2.1.7.1 through 2.2.1.8 remain the same (Code 1 pages 38-39, Code 2 pages 91-92).]

Code 1 page 45, the following section 2.2.3.6 shall be added;

Code 2 page 98, the following section 2.2.3.4 shall be added (paragraph numbers starting with 2.2.3.6 shall read 2.2.3.4...):

“2.2.3.6 (2.2.3.4) Additional drawbar tests for the special cases of tractors without a power take-off or with a power take-off unable to transmit the full power from the engine

2.2.3.6.1 In those cases when a tractor is not equipped with a power take-off or when the power take-off is not permitted to transmit the full power of the engine, the engine may be tested in accordance with section 2.2.1.8. If the engine is not tested, the following series of drawbar tests under unballasted conditions must be performed:

2.2.3.6.1.1 A two hour test at maximum power shall be performed in a gear chosen by the test station in agreement with the manufacturer within the range of gears from the lowest gear which

allows the maximum power of the engine to be utilised to the highest gear which allows a controllable test to be performed by the test station. The gear chosen must also allow to carry out the test according to 2.2.3.6.1.2 down to a speed where maximum drawbar pull occurs within maximum 15 per cent wheelslip. During this test, engine revolutions, fuel consumption, travel speed, slip, drawbar pull and relevant temperatures and pressures shall be monitored, and recorded at least every ten minutes. In addition, fuel temperature must be maintained throughout the test. The maximum drawbar power shall be the average of the readings made during the two-hour period. If the power variation deviates by more than 2 per cent from the average, the tests shall be repeated. If the variation continues, the deviation shall be stated in the report.

2.2.3.6.1.2 A test at full load and at varying engine speed (also called a "lugging run") shall be carried out with all adjustments the same as for the regular drawbar tests and PTO tests. Drive member slip shall be limited to 15 per cent and data recorded shall be the same as for the other drawbar tests. The gear shall be the same as that used in test 2.2.3.6.1.1.

2.2.3.6.1.2.1 A series of test runs shall be made starting at maximum power at rated engine speed. The drawbar load shall be stepwise increased resulting in a decrease of engine speed at 100 rpm increments. The test steps shall continue until maximum pull is obtained, or other limitations such as cooling capacity of the engine or torque converter (if equipped), or any other limitation stated by the manufacturer.

Tractors with a torque converter or torque multiplier which can be locked out shall be operated in both unlocked and locked mode. Tractors with automatic downshift systems shall be tested until the first downshift occurs. Section 2.2.3.6.1.2 possibly does not apply to tractors with infinitely variable shift systems.

2.2.3.6.1.2.2 A part-load test shall be made at 75 per cent of pull obtained at rated engine speed.

2.2.3.6.1.2.3 A second part-load test shall be made at 50 per cent of pull obtained at rated engine speed.

2.2.3.6.2 Graphical presentation of results

The test report shall include presentation of the following curves made for the full range of engine speeds available :

2.2.3.6.2.1 drawbar power as a function of engine speed;

2.2.3.6.2.2 increase in pull as a function of engine speed;

2.2.3.6.2.3 hourly and specific fuel consumption as a function of engine speed.”

Code 1, Specimen Test Report page 45, the following section 3.3.6 shall be added;

Code 2, Specimen Test Report page 118, the following section 3.3.4 shall be added (paragraph numbers starting with 3.3.6 shall read 3.3.4...):

“3.3.6 (3.3.4) Optional additional drawbar tests for tractors without a power take-off or with a power take-off unable to transmit the full power from the engine (This test is compulsory if the engine test is not chosen)

Date of tests:

Rated engine speed: min⁻¹

Selected gear and range:

						Fuel consumption		Temperatures			Atmospheric conditions		
Engine Speed	Travel Speed	Draw-bar Pull	Slip of wheels or tracks	Power	Increase in pull	Hourly	Specific	Fuel	Coolant	Engine oil	Temp.	Relative humidity	Pressure
min ⁻¹	km/h	kN	%	kW	%	kg/h	g/kWh	°C	°C	°C	°C	%	kPa

3.3.6.1 Two hour maximum drawbar power test

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3.3.6.2 Drawbar full load (lugging run) test

3.3.6.3 Drawbar part load test at 75% of pull at rated engine speed

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3.3.6.4 Drawbar part load test at 50% of pull at rated engine speed

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“

Code 1, Specimen Test Report Page 74, the following sentence shall be added at the end of paragraph 3.5 as a fourth indent:

“- If the angle of suspension of the tractor is less than 20°, indicate its value: ...°”

II. MODIFICATION OF CODE 4

Code 4 shall be modified as follows:

Page 67, section 1.2.1 shall read:

“1.2.1 Preliminary definition: median plane of the wheel **or track**

The median plane of the wheel **or track is equidistant from the two planes containing the periphery of the rims **or tracks** at their outer edges.”**

Page 71, paragraph 2.1 shall read:

“2.1 This OECD Standard Code is applicable to tractors having at least two axles for pneumatic tyred wheels **or having tracks instead of wheels and with an unballasted tractor mass not less than 800 kg.”**

Page 74, paragraph 3.3.3 shall read:

“3.3.3 An **adjustable track width setting for the wheels **or tracks** if present shall be chosen such that no interference exists with the protective structure during the tests.”**

Page 74, section 3.4.1 shall read:

“3.4.1 Longitudinal loading

For a **wheeled tractor with at least 50 per cent of its mass on the rear **axle and for tracked tractors**, the longitudinal loading shall be applied from the rear. For other tractors the longitudinal loading shall be applied from the front (see 3.5.2).”**

Page 74, paragraph 3.9.2 shall read:

“3.9.2 The required energy shall not exceed the energy calculated for the original test by more than 5 per cent. **The 5 per cent limit shall also apply to extensions in the case of substituting tracks for wheels on the same tractor; “**