Report on test in accordance with
OECD STANDARD CODE I for the Official
Testing of Agricultural Tractor Performance

Full Code

OECD No. **1462**



Agricultural Tractor
CASE-IH MAXXUM 5250 (4WD)

30 km/h version

Model denomination 5250 A

Manufacturer
JI CASE GmbH
D-41460 Neuss

Deutsche Landwirtschafts-Gesellschaft e.V. · Eschborner Landstraße 122
D-60489 Frankfurt a. M. · Telefon: (069) 24 78 80
Telex: 4 13 185 dlg-d · Telefax: (069) 24 78 81 10

This is a report on a tractor test in accordance with OECD STANDARD CODE for the Official Testing of Agricultural Tractor Performance (C(87)53(Final), Code I) and amendments (C(90)79, C(92)52).

It does not contain an evaluation of the tractor on practical work.

Duration of tests: January till March 1993

DLG-Testing Station for Agricultural Machinery, Max-Eyth-Weg 1,
D-64823 Groß-Umstadt

This report has been approved by the OECD Co-Ordinating Centre (CEMAGREF, France) as being in accordance with the OECD STANDARD CODE.

Date of approval: 30th June 1993

OECD No. 1462
Full Code

In this report all performance characteristics are given corresponding to the International System of Units.

The reference to the former used Technical System of Units is given by the following relations:

Forces	1 kN	=	1000 N	=	102	kp
Powers			1 kW	=	1,36	PS
Pressures	1 MPa	=	10 bar	=	10,2	kp/cm²
	100 kPa	=	1000 mbar	=	750,10	mm Hg

All rights including the right of translation, reprint and photo-mechanical copying — also of excerpts — reserved by the editor.

Printed in the Federal Republic of Germany, July 1993
DLG-No. 273

TABLE OF CONTENTS

		Page
SPECIFICATION OF TRACTOR		4 to 16
TEST CONDITIONS		17 to 20
COMPULSORY TESTS		
1	Main power take-off performance	21 to 24
2	Hydraulic power and lifting force	25
3	Drawbar power	26 and 27
4	Turning area and turning circle	28
5	Position of centre of gravity	28
6	Braking	29
7	External noise level	30
8	Repairs and remarks	30
ADDITIONAL TESTS UNDER THE RESPONSIBILITY OF THE DLG-TESTING STATION		
9	Measurements of noise in the safety cab	31
11	Lifting force (with modified 3-point linkage setting)	32

MAXXUM 5250 (4WD) **Test No. 93-034**

Tractor manufacturer:	JI CASE GmbH D-41460 Neuss
Location of tractor assembly:	D-41460 Neuss
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement by DLG
Place of running-in:	Neuss and Groß-Umstadt
Duration of running-in:	Engine 20 hours, tractor 200 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	CASE INTERNATIONAL
Trade name:	MAXXUM 5250 (4 WD), 30 km/h version
Model denomination:	5250 A
Type:	Wheel tractor, unit construction, four wheel driven
Serial no.:	JJF 101 9805
1st serial no.:	JJF 101 9801

Engine

Make:	CASE
Model:	6T-590
Type:	Watercooled 4 stroke Diesel-engine direct injection, supercharged,
Serial no.:	521 201 52
Cylinders:	6, in line, bore 102 mm, stroke 120 mm, displacement 5883 cm^3; compression ratio 17,5 ± 1,5 : 1;
Valves:	Overhead

Supercharging

Make:	HOLSET
Model:	J 919 117
Type:	Exhaust driven supercharger, without intercooler
Max. pressure:	75 ± 10 kPa

Fuel system:	AC SPARK fuel supply pump, BOSCH distributor injection pump VE R 371-2, serial no.: 169-63311; manufacturer's production setting 64 + 4 mm³/stroke at full load and rated speed; automatic injection timing device, commencement of delivery, static: 1,50 ± 0,06 mm piston stroke of injection pump at TDC; LUCAS multihole injection nozzles 352 8741; injection pressure 24,5 + 1 MPa; replaceable two-stage fuel filter; capacity of fuel tank 170 dm³
Governor:	BOSCH centrifugal variable speed governor, without supercharge pressure compensating device, governed range of engine speed 800 to 2350 rev/min, rated engine speed 2200 rev/min
Air cleaner:	DONALDSON, 1988 710 C1; dry paper element filter with precleaner, replaceable cartridge; electric warning indicator lamp; air intake below bonnet
Exhaust silencer:	NELSON-BURGESS, A 184 475; multi-chamber expansion reflection type oval 266x139 mm , 517 mm long, below bonnet; vertical pipe; mouth showing forward-upwards, 2670 mm above ground
Lubrication system:	Forced feed by internal gear pump, oil filter in full flow with replaceable cartridge, engine oil/cooling-water heat exchanger in crankcase
Cooling system:	Water cooling with impeller pump, overpressure relief valve set to 103 kPa; thermostat and by-pass circuit; fan with 7 blades with 450 mm dia; water capacity 22,0 dm³

Starting system:	Electrical; BOSCH solenoid pre-engaged drive starter motor 3,1 kW; cold starting aid: CAV flame glow plug in air intake channel Safety device: Range gear in neutral position, forward/reverse control in forward position, p.t.o. lever off
Electrical system:	12 Volt, negative earth; BOSCH 3-phase alternator K1-14 V/95A 1330 W; 2 lead acid batteries, 105 Ah, total 210 Ah at 20 hours rating

Transmission

Clutch (travel alone):	CASE POCLAIN wet multi-plate clutch, 127 mm dia, pedal operated or hydraulically controlled by forward-reverse lever
Gear box:	CASE POCLAIN, POWER SHIFT 30 km/h version; power shift speed change gear with 4 speeds; range gear with 4 synchronized ranges (I, II, III, IV); power shift reversing gear (F,R); in position reverse 3 ranges can be used; total 16 forward, 12 reverse speeds, 3 levers; optional, not fitted: 1 collar shifted creeper range (CR), acting on 2 range gears (I, II); total 24 forward and 20 reverse speeds
Rear axle and final drives:	CASE POCLAIN, bevel gear drive; bevel gear differential with multiplate differential lock, electro-hydraulically engaged/disengaged by switch or disengaged by service brake operation or engine cutoff; planetary final drives
Front axle and final drives:	CARRARO 709/S4P; driven by wet multi-plate clutch, propeller shaft (in tractor's median plane) and bevel gear; clutch operated by electro-hydraulic switch; limited slip differential; planetary final drives

Total ratios and speeds:

Number of revolutions of front wheels for one revolution of rear wheels: 1,4066

Range	Gear	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed *) at rated engine speed 2200 rev/min km/h
Forward speeds			
I	1	339,96	2,00
	2	282,25	2,41
	3	228,37	2,98
	4	184,35	3,69
II	1	149,16	4,56
	2	123,84	5,49
	3	100,20	6,79
	4	80,89	8,41
III	1	90,73	7,50
	2	75,33	9,03
	3	60,95	11,16
	4	49,20	13,82
IV	1	41,51	16,38
	2	34,46	19,73
	3	27,89	24,39
	4	22,51	30,21
Reverse speeds			
I	1	278,52	2,44
	2	231,24	2,94
	3	187,10	3,63
	4	151,04	4,50
II	1	122,21	5,57
	2	101,46	6,70
	3	82,09	8,28
	4	66,27	10,26
III	1	74,33	9,15
	2	61,71	11,02
	3	49,93	13,62
	4	40,31	16,87

*) calculated with the radius index (ISO 4251/1-1984) 820 mm

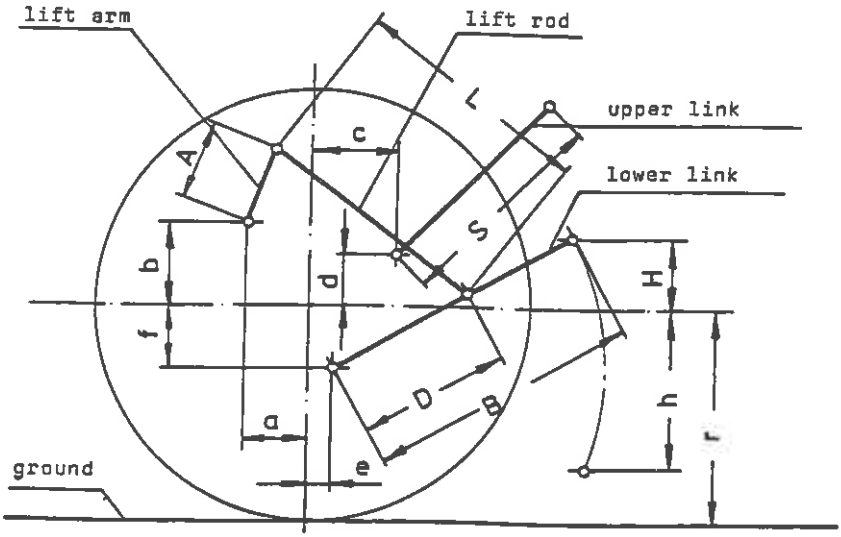
Main p.t.o.: Independent;
driven by wet multi-plate clutch;
hydraulically operated by lever;
1 shaft, p.t.o. speed change by reversing shaft, 35 mm dia, 6 splines resp.
35 mm dia 21 splines, ISO 500-1979 type 1 resp. 2;

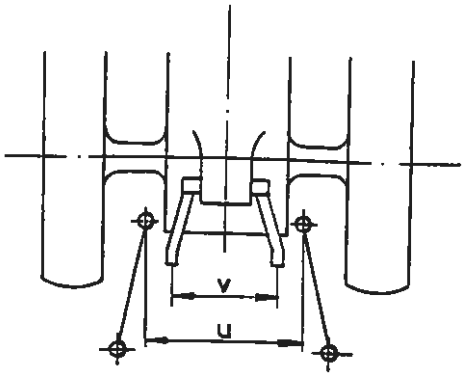
725 mm above ground, 550 mm behind rear wheel centre;
sense of rotation clockwise, viewed facing tractor's rear

p.t.o. type	p.t.o. speed rev/min	engine speed rev/min	p.t.o. transmission ratio	Power restriction kW
540	540 549	2163 2200	4,0062	-
1000	1000 996	2209 2200	2,2095	-

Power lift	CASE POCLAIN; servohydraulic power lift, unit construction, draft, position- and intermixable control, floating position, fast raising, lowering throttle, lower links' sensing
Hydraulic system:	Load sensing, pressure and flow compensated system; REXROTH variable displacement axial-piston pump, driven by gearbox, max. delivery 75 dm³/min at rated engine speed, oil cooler in front of engine water cooler, oil filter in feed line; REXROTH control valve, (lever in transport position lockable), relief valve pressure setting 19,1 ± 0,5 MPa; single acting cylinder with 105 mm bore and 227 mm stroke, safety valve set to 22,0 MPa; 2 double acting additional CASE control valves, 4 oil couplings at rear of tractor; maximum volume of oil, available to external cylinders : Stationary tractor operation on slopes of no more than 2 degrees 30 dm³, moving tractor operation on slopes of no more than 15 degrees 20 dm³, of no more than 30 degrees 12 dm³; hydraulic oil reservoir in common with gear box with 76 dm³ capacity (88 dm³ capacity with increased oil level) the hydraulic oil pump further provides hydraulic pressure for actuating of steering, p.t.o clutch, power-shift gear, rear axle differential lock and for shifting the front axle drive clutch
Front power lift:	Available, not fitted

Three-point linkage: Category 2 acc. to ISO 730/1-1990, extendable lower links





Dimensions of rear implement linkage (projected lengths in mm, underlined dimensions are valid for power lift measurements p. 25, dimensions marked with * are valid for the power lift measurements p. 32)

Rear tyres 18.4 R 38	*) radius index	(r)	820
Front tyres 14.9 - 24	*) radius index	(r')	590
Length of lift arms		(A)	230
Length of lower links		(B)	877
Distance of lift arm pivot points from rear axle centre	horizontal	(a)	-243
	vertical	(b)	181
Horizontal distance between lower link pivot points		(u)	543
Horizontal distance between lift arm end points		(v)	692
Length of upper link		(S)	610 to 880, 785, 765*
Distance of upper link pivot point from rear wheel axis	horizontal	(c)	359
	vertical	(d)	160 or 230*
Distance of lower link pivot point from rear wheel axis	horizontal	(e)	231
	vertical	(f)	246
Distance of lower link pivot points from lift rod pivot points on lower links		(D)	555
Length of lift rods		(L)	540 to 640*

Height of lower link hitch points relative to rear wheels' centre line (situated 820 mm above ground), these data are valid for unloaded power lift:

Length of lift rods	(L)	640*		540
Linkage distance of lift rods	(D)	555		
Lowest position	(h)	595		305
Highest position	(H)	120		315
Transport position	(H')	120		315

*) Assuming r resp. r'= tyre dynamic radius index of ISO 4251/1-1984

Pull equipment

Swinging drawbar:	Longitudinally adjustable	
	height above ground	420 mm
	distance of hitch point	
	from rear wheel axis,	
	horizontally	900, 950, 1050, 1150 mm
	from p.t.o. shaft end	
	vertically	305 mm
	horizontally	350, 400, 500,600 mm
	pin hole swingable to both sides, of centre line	
	with drawbar fully pushed in	60 mm
	with drawbar fully drawn out	180 mm
	distance of pivot point from rear wheel axis	
	horizontally (before axis)	73 mm
	diameter of drawbar pin hole	38 mm
	maximum vertical permissible load	
	(drawbar fully pushed in)	21 kN
Trailer hitch:	Optionally available, not fitted	
Holed drawbar:	Optionally available, not fitted	
Towing hitch:	Optionally available, not fitted	

Steering

DANFOSS, OSPC 160 LSR;
hydrostatic front wheel steering, connected by sequence valve to the hydraulic system of the tractor (see on page 9);
1 integrated WEBER ram (symmetrical design),
236 mm stroke, 75 mm bore and 42 mm dia of piston rod, directly acting on steering levers,
working pressure 17,2 ± 0,35 MPa

Brakes

Service brake:	CASE POCLAIN pedal operated muscle power brake with hydraulic transmission,using oil of gearbox, acting on rear wheels; oil-immersed disc brake with 1 ring-piston on each differential half shaft; disc diameter 300 mm; trailer braking take-off optional, on request hydraulic or pneumatic (not fitted to tested tractor)
Parking brake:	Mechanical wet disc brake, operated by lever with ratchet; 2 lining discs with 143 mm dia each, situated on drive shaft of rear axle (in front of bevel-gear pair)
Steering brake:	Divided pedal of service brake, for normal use locked together

Wheels

Front:	Steering and driving, 2 pneumatics
Rear:	Driving, 2 pneumatics
Wheelbase:	2585 mm
Track width:	At front and at rear from 1530 mm up to 2230 mm adjustable in steps of 100 mm each by adjustable gauge bowl wheels and by turning the wheels

Possible combinations of tyres sizes

Tyre size	
Front	Rear
12.4 - 24	15.5 - 38
11.2 - 24	16.9 - 30
11.2 - 24 12.4 - 24	16.9 - 34
13.6 - 24 14.9 - 24	16.9 - 38
12.4 - 24 13.6 - 24	18.4 - 34
14.9 - 24	18.4 - 38
12.4 - 24	12.4 - 42
13.6 R 28	14.9 R 46
12.4 R 28	12.4 R 46

Protective structure	CASE POCLAIN, cab model CX-94; OECD-tested driver's platform with integrated safety frame, OECD approval no. CSS 088/15; not tiltable, antivibration mounted by silent-blocks on tractor; 2 doors with 2 steps each, steps 595 and 885 mm, driver's platform 1165 mm above ground, rear window and rear side windows tiltable; air conditioner and combined heating/ventilation system with 3-step blower and cooling-water heat exchanger incorporated in roof; air intake above rear window, dry air filter; air outlet jets in the roof at front, recirculating louvers at rear, defroster nozzles;	
Noise reduction materials:		
Roof:	Fabric, PUR-foam resin impregnated felt (molded part) PUR-foam	3,5 mm 7 mm 50 mm
Roof, front part:	ABS-panel part	3 mm
Floor:	Compound mat, consisting of: Synthetic heavy foil + PVC coated (molded) PE-foam or partially PE-chip foam with waterproof sealing	 5 mm 25 mm 22,5 mm
Seat support, on the surface and the front side:	Compound mat, consisting of: Synthetic heavy foil + PVC coated (molded) PE-foam + waterproof sealing	 5 mm 25 mm

Console panel:	Compound mat, consisting of: Synthetic heavy foil + PVC coated (molded) PE-foam	 5 mm 7 mm
Rear panel:	ABS-panel part	3 mm
Mudguards:	PVC-foil PUR-foam	3 mm 22 mm
B-posts:	ABS-panel part	3 mm
Bulk head:	PUR-heavy-foil PE-foam	6 mm up to 6 mm
Draught proofing:	Rubber seals and Silicon	

Driver's seat

SEARS, 2000
upholstered seat with back rest and arm rests, pneumatic suspension with automatic weight adjustment, hydraulic shock absorber; height of unloaded seat above platform steplessly adjustable from 380 to 520 mm, longitudinal adjustment 150 mm

Operating hours meter

Electronic, counts real operating hours when engine is running

Lighting

Electrical, 12 Volt, acc. to US legislation

	Height above ground of centre mm	Size mm	Distance from outside edge of lights to median plane of tractor mm
Headlights	1400	160x80	300
Auxiliary lights	2580	130x75	240
Rearlights	1775	131x81	870
Reflectors	1810	75x30	870

additional SMV sign

TEST CONDITIONS

Overall dimensions

	Length mm	Width mm	Height at top of protective structure mm	Height at top of exhaust silencer pipe mm
Unballasted	4350	2190	2715	2740
Ballasted	5210	2190		

Ground clearance (unballasted tractor): 402 mm
Clearance-limiting part: Swinging drawbar

Tractor mass (with cab)

	Unballasted		Ballasted	
	without driver kg	with driver kg	without driver kg	with driver kg
Front	1865	1875	3090	3100
Rear	3135	3200	4095	4160
Total	5000	5075	7185	7260

Ballast

	Weigths		Water
	Number	Total mass kg	kg
Front	16	855	355
Rear	1 (fitted to 3-point linkage)	305	670

Tyres and track widths specifications

	Front	Rear
Tyres:	FIRESTONE	FIRESTONE
Dimensions	14.9 - 24	18.4 R 38
ply rating/load index speed index	8 / - -	- / 146 A8
type	diagonal-ply	radial-ply
maximum load (tyre manufacturer's) 40 km/h	14,1 kN	30,0 kN
maximum load (tractor manufacturer's) 30 km/h	17,6 kN	32,1 kN
inflation pressure (tyre manufacturer's)	180 kPa (30 km/h)	160 kPa (30 and 40 km/h)
radius index	590 mm	820 mm
Chosen track width	1730 mm	1730 mm
Rims	W12Lx24	W 15x38
Technically permissible axle load	31,0 kN	60,0 kN
Technically permissible total weight	72,6 kN	

Oils and lubrication

Capacity and change interval:

	Capacity dm^3	Oil change h	Filter-change h
Engine	15	250	
Gearbox, hydraulic system, rear axle and final drives	76	1000	1000
Front axle	6,5		-
Final drives (front)	2 x 1,0		

MAXXUM 5250 (4WD) **Test No. 93-034**

Specification:

	Recommended	Used during test
Engine oil used in: Engine Type Viscosity Winter Summer Tropics Classification	 Engine oil SAE 10W/30 SAE 15W/40 or 10W/30 SAE 15W/40 API-CE	 CASE-IH engine oil no.1 SAE 15W/40 API-CE
Transmission oil used in: Gearbox with rear axle incl. final drives, hydraulic system, steering, brake system Type Viscosity Classification Font axle incl. final drives Type Viscosity Classification	 HY-TRAN PLUS ISO-VG 95-115 MS 1207 *) Gear oil SAE 85W/140 MS 1316 *)	 FINA HYTRAN-PLUS ISO-VG 95-115 MS 1207 *) FINA SAE 85W/140 MS 1316 *)

*) MS = CASE material specification

Grease: Multi purpose grease
number of lubrication points: 10

Fuel

Type:	ARAL-Diesel-fuel, in conformity with DIN 51601	
Density at 15°C:	At all tests	0,827 g/cm^3

COMPULSORY TESTS

1. MAIN POWER TAKE OFF PERFORMANCE (1000 rev/min)

Date of tests: 14th January 1993
Location of tests: DLG-Testing Station Groß-Umstadt
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Speed Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power						
1.1 At 2-hour test						
86,2	2000	905	25,72	21,27	247	3,35
1.2 At rated speed						
83,7	2200	996	25,97	21,47	257	3,22
1.3 At standard p.t.o. speed						
83,7	2200	996	25,97	21,47	257	3,22
1.4 Part loads, the governor hand lever in the position corresponding to maximum power at full load (curve a)						
1.4.1 the torque corresponding to maximum power at rated speed						
83,7	2200	996	25,97	21,47	257	3,22
1.4.2 85% of the torque obtained in 1.4.1						
72,9	2256	1021	23,37	19,32	265	3,12
1.4.3 75% of the torque defined in 1.4.2						
55,6	2295	1039	19,40	16,04	288	2,87
1.4.4 50% of the torque defined in 1.4.2						
37,4	2313	1047	15,48	12,80	342	2,42
1.4.5 25% of the torque defined in 1.4.2						
18,8	2325	1052	11,60	9,59	511	1,62
1.4.6 unloaded						
-	2349	1063	8,51	7,04	-	-

Power kW	Speed Engine rev/min	Speed P.t.o. rev/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
1.5 Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)						
1.5.1 the torque corresponding to maximum power						
83,7	2200	996	25,97	21,47	257	3,22
1.5.2 85% of the torque obtained in 1.5.1						
72,9	2256	1021	23,37	19,32	265	3,12
1.5.3 75% of the torque defined in 1.5.2						
55,6	2295	1039	19,40	16,04	288	2,87
1.5.4 50% of the torque defined in 1.5.2						
37,4	2313	1047	15,48	12,80	342	2,42
1.5.5 25% of the torque defined in 1.5.2						
18,8	2325	1052	11,60	9,59	511	1,62
1.5.6 unloaded						
-	2349	1063	8,51	7,04	-	-

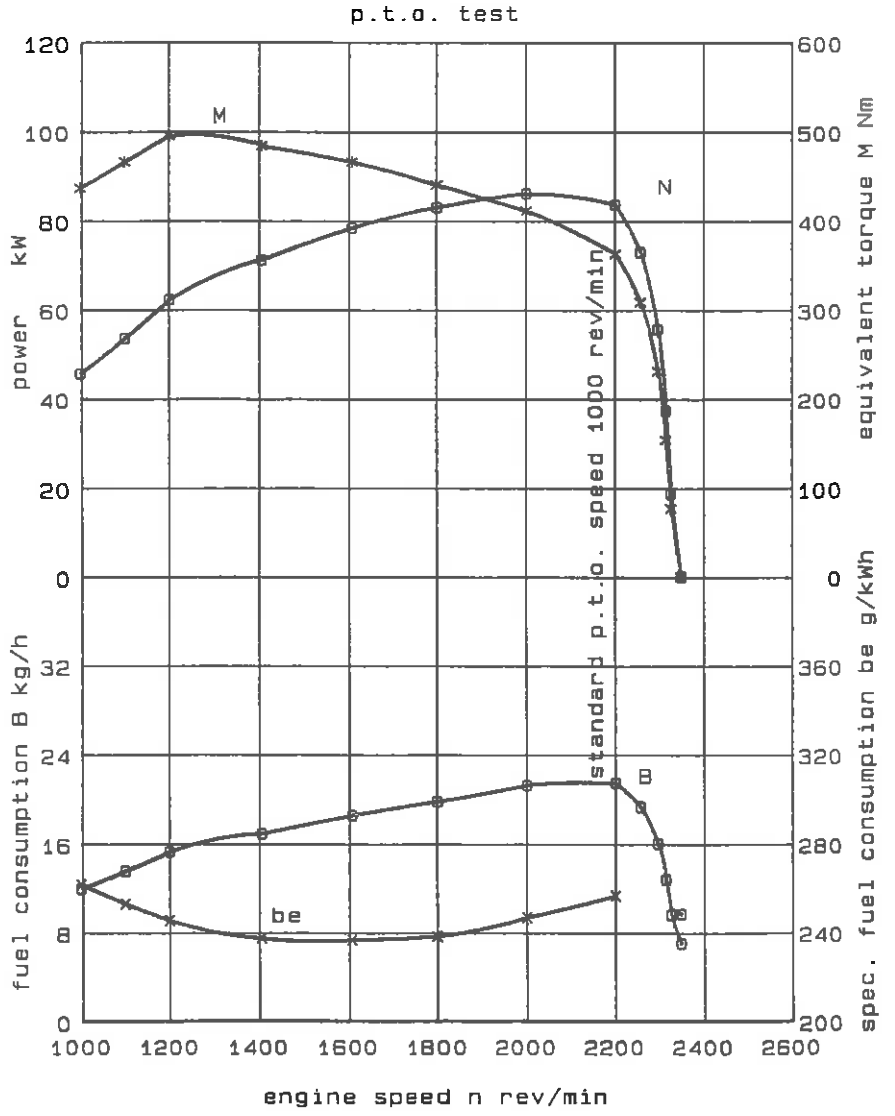
No load maximum engine speed: 2349 rev/min
Equivalent flywheel torque at rated engine speed: 363 Nm
Equivalent flywheel torque at 2-hour test: 411 Nm
Maximum equivalent flywheel torque: 496 Nm at 1199 rev/min of the engine

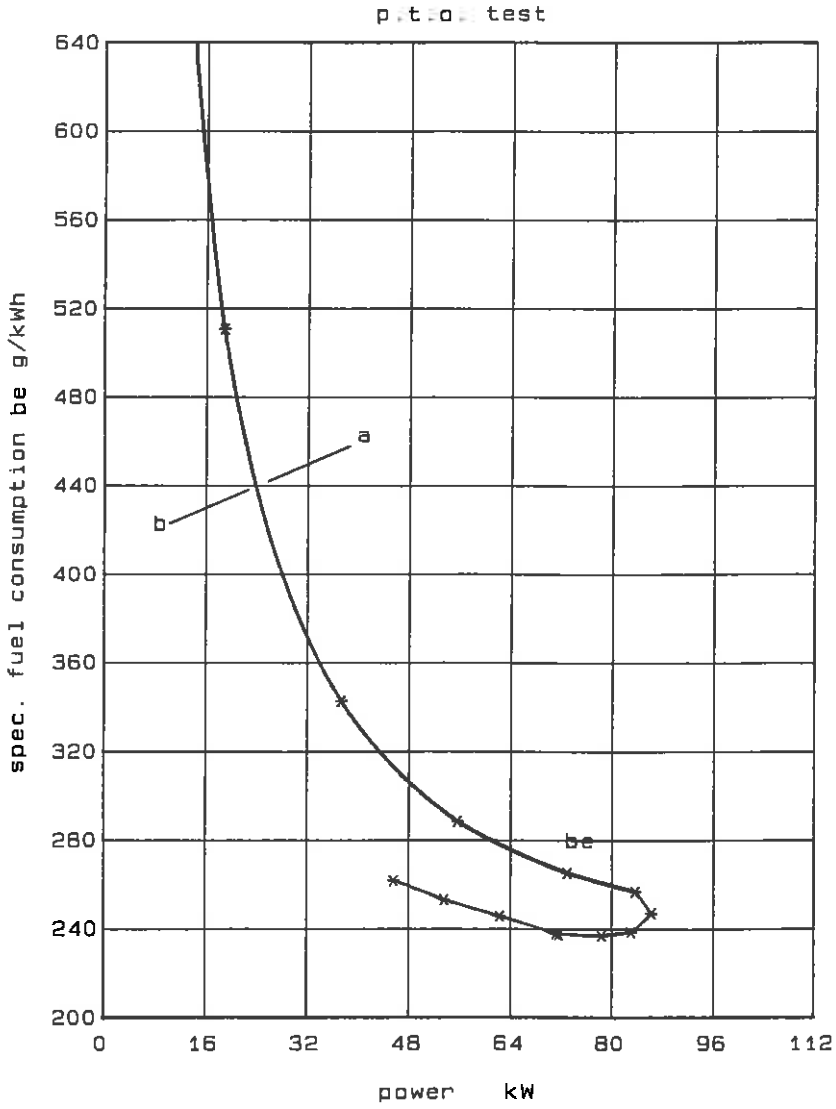
Mean atmospheric conditions

temperature	20 °C
pressure	101 kPa
rel. humidity	35 %

Maximum temperatures

coolant	85 °C
oil	107 °C
fuel	31 °C
air intake	25 °C


p.t.o. test
power kW
equivalent torque M Nm
fuel consumption B kg/h
spec. fuel consumption be g/kWh
standard p.t.o. speed 1000 rev/min
engine speed n rev/min
M
N
B
be
120
100
80
60
40
20
0
600
500
400
300
200
100
0
32
24
16
8
360
320
280
240
200
1000
1200
1400
1600
1800
2000
2200
2400
2600


p.t.o. test
spec. fuel consumption be g/kWh
640
600
560
520
480
440
400
360
320
280
240
200
0
16
32
48
64
80
96
112
power kW
a
b
be

2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: 3rd and 5th March 1993

2.1 Hydraulic power test

Sustained pressure with relief valve open 19,3 MPa
Pump delivery rate at minimum pressure 75,0 l/min

	Hydraulic power kW	Flow rate l/min	Pressure MPa	Oil temperature °C
At 90% of the actual relief valve setting	15,5	53,5	17,4	65
Maximum	17,5	63,6	16,5	65

Tapping point used for test: at rear of tractor, connected with additional control valve no.2

2.2 Power lift test

Maximum pressure in the power lift cylinder 18,3 MPa

	At the hitch points	On the frame
Height of lower hitch points above ground in down position	225 mm	
Vertical movement without lifting forces with lifting forces	715 mm 689 mm	912 mm 872 mm
Max. corrected force exerted through full range	36,1 kN	31,1 kN
Corresponding pressure	16,5 MPa	
Moment about rear axle	-	53,3 kNm
Max. tilt angle of mast from vertical		11°

Lifting heights relative to horizontal lower links

mm	-446	-400	-349	-300	-200	-100	0	+100	+200	+300	+340	+400	+426
Lifting forces at hitch points, corrected to 16,5 MPa													
kN			36,1	39,2	43,1	44,6	44,6	44,2	44,0	43,5	43,5		
Lifting forces at standard frame, corrected to 16,5 MPa													
kN	31,3	32,4		34,7	36,0	36,2	35,8	34,9	33,8	32,2		31,3	31,1

MAXXUM 5250 (4WD)

3 DRAWBAR PERFORMANCE

Date of test: 25th January till 9th February 1993
Type of track: Concrete

Gear and range	Speed km/h	Drawbar pull kN	Power kW	Engine speed rev/min	Slip of wheels %
3.1 MAXIMUM POWER IN TESTED GEARS (unballasted tractor)					
1 II	3,95	58,92	64,6	2251	14,9
2 II	4,24	58,70	69,1	2002	15,0
3 II	5,79	47,95	77,1	1997	5,6
1 III	6,45	43,87	78,6	2000	4,7
4 II	7,33	38,56	78,5	1997	3,6
2 III	7,90	35,55	78,0	1999	3,1
3 III	9,84	28,33	77,4	2000	2,6
4 III	12,25	22,46	76,4	2001	1,8
3.2 MAXIMUM POWER IN TESTED GEARS (ballasted tractor)					
1 I	1,78	80,98	40,0	2302	15,1
2 I	2,12	81,24	47,8	2287	15,0
3 I	2,59	80,40	57,8	2262	15,0
4 I	3,02	81,39	68,1	2129	15,0
1 II	3,83	70,41	74,9	2000	7,1
2 II	4,74	58,53	77,1	2002	4,7
3 II	5,94	47,19	77,9	2000	3,2
1 III	6,58	42,47	77,6	2000	2,7
4 II	7,43	37,69	77,8	2000	2,2
2 III	7,97	34,92	77,3	2000	2,1
3 III	9,92	27,42	75,6	2002	1,5
3.3.1 FIVE-HOUR-TEST at 75% of pull at maximum power (at rated engine speed)					
2 II	5,52	38,77*	59,4	2276	2,4
*) drawbar pull at maximum power (measured at rated engine speed): 51,70 kN					
3.3.2 FIVE-HOUR TEST at pull corresponding to 15% wheel slip					
3 I	2,56	81,00	57,6	2259	-

Oil consumption during ten hours duration of tests 3.3.1 and 3.3.2 : 16 g/h

Test No. 93-034

	Height of drawbar above ground mm	Tyre inflation pressure Front	Rear
unballasted	420	80 kPa	80 kPa
ballasted	416	160 kPa	100 kPa

Specific fuel consumption g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Coolant °C	Engine oil °C	Atmospheric conditions Tempe-rature °C	Relative humidity %	Pressure kPa
326	2,54	40	83	88	0	86	102,0
307	2,69	40	83	86	-1	85	102,0
274	3,02	43	84	86	-2	85	100,0
271	3,05	40	84	90	0	85	102,0
272	3,04	45	82	90	3	82	100,0
273	3,03	44	82	90	2	78	102,0
278	2,98	44	83	90	3	60	102,0
279	2,96	44	81	90	6	68	102,0
377	2,19	49	80	91	-1	85	102,0
356	2,32	48	80	90	-1	87	102,0
336	2,46	49	81	90	-1	86	102,0
299	2,76	46	82	91	-1	85	102,0
285	2,90	46	82	91	-1	85	102,0
277	2,99	48	83	91	0	85	102,0
275	3,01	48	83	90	0	80	102,0
275	3,00	49	83	91	0	80	102,0
275	3,00	49	83	90	0	80	102,0
278	2,97	48	82	90	0	80	102,0
284	2,91	49	82	90	-1	79	102,0
in 2 II gear							
303	2,40	50	81	90	4	93	101,6
with additional ballast: 700 kg							
-	-	49	81	90	4	93	101,4

Those figures not quoted are irrelevant due to the additional ballast.

4 TURNING AREA AND TURNING CIRCLE (front wheel drive disengaged)

	With brakes		Without brakes	
	left-hand m	right-hand m	left-hand m	right-hand m
Radius of turning area	4,30	4,30	4,67	4,67
Radius of turning circle	4,00	4,00	4,37	4,37

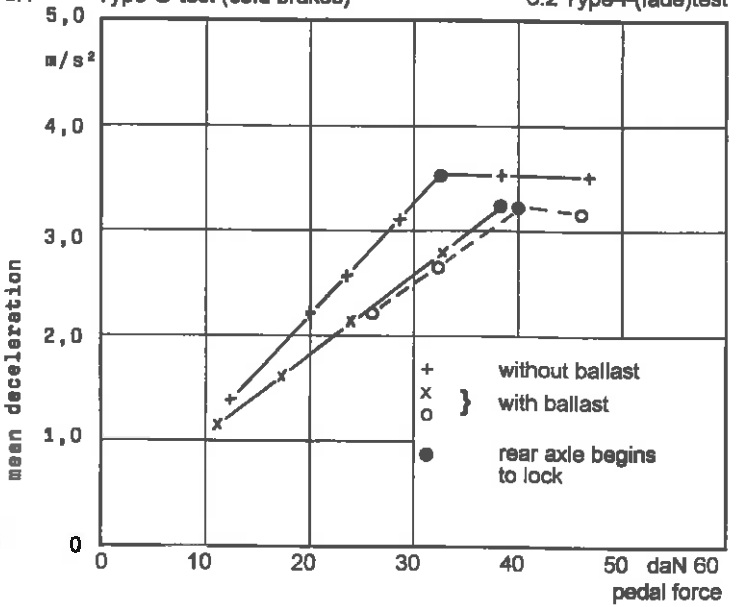
5 LOCATION OF CENTRE OF GRAVITY

Height above ground	963 mm
Distance forward from rear axle centre	955 mm
Distance from tractor's median plane, to the right	12 mm

6 BRAKING (front wheel drive disengaged)
Date of tests: 10th and 11th February 1993

	Tractor mass (with driver) front kg	rear kg	total kg	Speed before application of brakes km/h
Without ballast	1875	3200	5075	31,9
With ballast	3100	4160	7260	31,8

6.1 Type-O-test (cold brakes) ——— 6.2 Type-I-(fade)test ———



No significant deviation of tractor from original course and no abnormal vibrations

Brakes-heating: Actuating of brake for 1 km with pedal force corresponding to 1 m/s²

6.3 Parking brake

	Ballasted tractor on 18%-slope up	down
Braking device control force daN	25	30

7 MEASUREMENT OF EXTERNAL NOISE LEVEL
(Front wheel drive disengaged)

Date of test:	18th February 1993
Type of track:	Concrete
Type of sound level meter:	BRÜEL & KJAER model 2233

Results of test

Gear number:	4 IV
Travelling speed before acceleration:	24,6 km/h
Sound level:	87,5 dB(A)

8 REPAIRS AND REMARKS None

ADDITIONAL TESTS UNDER THE RESPONSIBILITY OF THE DLG-TESTING-STATION

9 MEASUREMENTS OF NOISE IN THE SAFETY CAB

Type of track: Concrete
Type of sound level meter: BRÜEL & KJAER model 2233
Date of test: 2nd February 1993

According to OECD CODE V

Gear number	Drawbar pull kN		Measured travelling speed km/h		Sound level dB(A)	
	1)	2)	1)	2)	1)	2)
Unloaded test in the gear giving the speed nearest to 7,5 km/h						
1 III	-	-	7,95	7,85	78,0	78,5
Unloaded test in the gear giving the maximum speed						
4 IV	-	-	32,62	-	79,0	-
Tests with the drawbar pull for which the tractor gives the maximum sound level (combination of gear giving the nominal speed nearest to 7,5 km/h and also in any gear with a sound level increase of at least 1 dB(A))						
1 III	38,91	39,21	7,02	7,09	80,0	80,0

1) front axle drive disengaged
2) front axle drive engaged

10 LIFTING FORCE (with modified 3-point linkage setting)

Date of tests: 8th March 1993

Length of lift rods		(L)	640 mm
Distance of lower link pivot points from lift rod pivot points on lower links		(D)	555 mm
Distance of upper link pivot point from rear wheel axis,	horizontal	(c)	359 mm
	vertical	**(d)**	**230** mm
Length of upper link		**(S)**	**765** mm

see on pages 10 and 11 for more information

Maximum pressure in the power lift cylinder: 18,3 MPa

	On the frame
Height of lower hitch points above ground in down position	225 mm
Vertical movement without lifting forces	857 mm
Vertical movement with lifting forces	803 mm
Max. corrected force exerted through full range	32,6 kN
Corresponding pressure	16,5 MPa
Moment about rear axle	56,0 kNm
Max. tilt angle of mast from vertical	8°

Lifting heights relative to horizontal lower links

mm	-421	-400	-300	-200	-100	0	+100	+200	+300	+382
kN	33,5	34,1	36,7	38,3	38,5	37,8	36,9	35,6	34,1	32,6

Lifting forces at standard frame, corrected to 16,5 MPa

Published
with the support of the Federal Minister for Food, Agriculture and Forestry

Deutsche Landwirtschafts-Gesellschaft e.V. (DLG)
Fachbereich Landtechnik — Prüfungsabteilung —
Eschborner Landstraße 122 (DLG-Haus)
D-60489 Frankfurt am Main