O.E.C.D. Report No. 251

Report on test in accordance with
O.E.C.D. Test Code for agricultural tractors

DEUTZ DIESEL TRACTOR D 50 06

Manufactured by : KLÖCKNER-HUMBOLDT-DEUTZ A.G.
5 Köln-Deutz



Date of Tests: May - October 1968

This report has been approved by the O.E.C.D. Co-ordinating Centre (C.N.E.E.M.A.,France) as being in accordance with the O.E.C.D.-Tractor Test Code.

Date of Approval: 3.12.1968 Serial No.: 251

DEUTSCHE LANDWIRTSCHAFTS-GESELLSCHAFT e.V.
Prüfungsabteilung für Landmaschinen
6 Frankfurt am Main, Zimmerweg 16

This Bulletin is based on engineering tests in accordance with the O.E.C.D. Tractor Test Code. It does not contain an evaluation of the performance of the tractor on practical farm work.

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No. 68 - 123

TABLE OF CONTENTS

	Page
Specification of tractor	4 - 8
Fuel and lubricants used in tests	9
COMPULSORY TESTS	
(1) Main power take-off performance	
Table with the results	10
Diagrams with the results	11-12
(2) Drawbar performance tests on a concrete track	
Table with the results	13
Diagrams with the results	14-16
(3 and 4) Turning space and turning circle	17
(5) Location of centre of gravity	17
(6) Tests of brakes	18
(7) Measuring of ambient noise, emitted by the tractor	19
(8) Measuring of the noise at the drivers ear level	19
(9) Test of power lift and hydraulic pump performance	20
OPTIONAL TESTS	
(10) Engine tests	
Table with the results	21
Diagrams with the results	22-24

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No. 68 - 123

Tractor manufacturer:	Klöckner-Humboldt-Deutz A.G.,5 Köln-Deutz
Submitted for test by:	Manufacturer
Selected by:	Manufacturer by agreement with Schlepper-Prüffeld Darmstadt
Place of running-in:	Köln-Deutz and Darmstadt
Duration of running-in:	Engine 70 hours, tractor 50 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	Klöckner-Humboldt-Deutz A.G.,5 Köln-Deutz
Model:	D 50 06
Type:	Diesel-tractor, unit construction
Serial No.:	7873/4

Engine

Make:	Klöckner-Humboldt-Deutz A.G.,5 Köln-Deutz
Model:	F 3 L 912
Type:	Air cooled 4-stroke Diesel engine
Serial No.:	4626 862

Cylinders: 3 cylinders, vertical in line; 100 mm bore, 120 mm stroke; capacity 2826 cm^3; compression ratio 17 : 1; overhead valves; replaceable ribbed single cylinders

Fuel system: Fuel: Commercially available diesel oil; Bosch type PES 3A 750C 410/3 RS 1183 injection pump; Bosch type DLLA 149 S 394 injection nozzles; injection pressure 175 kp/cm^2; injection timing 28° before TDC; Pierburg type PE 15252 feed pump; water trap incorporated in fuel tank; felt-tube filter element; capacity of fuel tank appr. 70 l

Governor: Make: Robert Bosch GmbH, 7 Stuttgart; type EP/RSV 325-1150 A 8 B 474 DL centrifugal variable speed governor; governed range of engine speed 660 rev/min to 2420 rev/min

rated engine speed for p.t.o.work	2300 rev/min
for field work	2300 rev/min
for transportation work	2300 rev/min
for belt work	2300 rev/min

Air cleaner: Main filter
Make: Motor-Condensator, 68 Mannheim
oil-bath type, oil capacity 1,14 l

Pre-cleaner
Make: Motor Condensator, 68 Mannheim
centrifugal type

SCHLEPPER-PRÜFFELD

. Deutz . D 50 06

Test No. 68 - 123

Lubrication system: Forced feed from gear type pump; metal strainer in sump; screen type filter in full flow with by-pass valve; oil capacity 9,4 l; recommended oil change period 200 - 240 hours using branded normal HD oil; recommended oil in winter HD SAE 10 W
in summer HD SAE 20 W/20
in tropics HD SAE 30

Cooling system: Air cooling from V-belt driven axial blower

Electrical equipment Voltage 12 Volt, negative earth

Starting device: Bosch 12 Volt type JD 12 V 3 PS starter motor
Generator: Bosch type K (R) 14 V 16 A 9
Battery: Lead acid type, 12 Volt 110 Ah, special battery

Transmission

Clutch: Make: Fichtel & Sachs AG., 872 Schweinfurt; type DT 280/228 N dual dry disc clutch, operated by foot pedal

Gearbox: Make: Klöckner-Humboldt-Deutz A.G.,5 Köln-Deutz; type TW 50; constant-mesh type gearing with jaw-type clutch selecting gear and 2-stage group gear giving 8 forward speeds and 4 reverse

Rear axle and final drive: Make: Klöckner-Humboldt-Deutz A.G.,5 Köln-Deutz; bevel gear type differential gear with crown wheel and pinion; differential lock fitted, operated by hand lever, self-disengaging

Oil capacity: Selecting gear, group gear and rear axle total appr.14 l; recommended oil changing period 1500 hours

Total ratios and speeds:

Group gear	Gear No.	Number of engine revolutions for one revolution of the driving wheel	Theoretical travelling speed for 2300 rated speed of engine km/h	m/s
slow stage (L.)	1.	263,60 : 1	2,14	0,594
	2.	165,90 : 1	3,39	0,942
	3.	113,90 : 1	4,90	1,361
	4.	67,41 : 1	8,36	2,220
fast stage (S.)	1.	88,64 : 1	6,36	1,767
	2.	55,77 : 1	10,10	2,805
	3.	38,18 : 1	14,50	4,030
	4.	22,65 : 1	24,86	6,910
reverse (R.)	1.	233,00 : 1	2,42	0,672
	2.	146,60 : 1	3,84	1,067
	3.	100,40 : 1	5,50	1,528
	4.	59,59 : 1	9,45	2,625

Power take-off	Main p.t.o.,live power-take-off, manually engaged
Location:	At rear of tractor, in median plane of tractor, 640 mm above ground
Dimensions:	24 x 34,9 x 8,6 mm = $1\frac{3}{8}$", 6 splines (acc.to DIN 9611 Form A; BS 1495; ASAE S 203.2)
Speed:	600 rev/min at 2300 rev/min rated engine speed; standard p.t.o.-speed 540 rev/min at 2070 rev/min engine speed, may be set by aid of tractormeter
Direction of rotation:	Clockwise, viewed from tractor rear
Belt pulley	(Not fitted on tractor tested; figures acc.to manufacturers specifications)
Location:	At rear of tractor; driving unit fitted on p.t.o.-shaft, manually engaged
Dimensions:	320 mm diameter, 140 mm width
Speed:	1254 rev/min at 2300 rev/min rated engine speed; linear belt speed 24,1 m/s
Direction of rotation:	Anticlockwise, viewed from right hand side of tractor
Power lift	Make: Klöckner-Humboldt-Deutz AG.,5 Köln-Deutz; (Deutz Transfermatic System); hydraulic power lift with draft control, position control and floating position; single acting ram; Bosch type HY/ZFR 1/11 CL (112/1) gear type pump, directly driven from engine; maximum oil pressure 175 kp/cm²; oil capacity 12 l; optionally 4 external tappings for two dual acting rams with remote control and additional control valves make Deutz. (When tractor is fitted with a hydrostatic steering, oil pump Bosch type HY/ZFR 1/14 CL (112/1) will bi installed)
Pull attachment	
Implement linkage:	Three-point implement linkage category I and II (acc.to DIN 9674) controlled by power lift; lift height above ground with category I :from 139 mm to 938 mm, changed by power lift and changing length of lift rods; lift height above ground with category II : from 34 mm to 990 mm, changed by power lift and changing length of lift rods
Drawbar:	Fixed on hydraulically controlled implement linkage; central hole and 3 holes apart either side with 80 mm distance each (acc.to DIN 9671); distance of central hole to the end of p.t.o. 511 mm; distance to rear axle 967 mm

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No. 68 - 123

Trailer hitch: At rear of tractor; height above ground 465-605-775 mm and 530-670-840 mm, changed by a pin, shifting and reversing hitch

Towing hitch: At rear of tractor; height above ground 650 mm

Steering device Make: Zahnradfabrik Friedrichshafen AG. 799 Friedrichshafen;
ZF Gemmer-steering type 73, model GD 28 A, operated by hand wheel;
(optionally: ZF hydrostatic steering type 74 model 09)

Brakes

Parking brake: Mechanically acting as internal shoe type brake on a brake drum on a gear shaft; operated by hand lever with locking ratch

Foot brake: Mechanically acting as internal shoe type brake on brake drum in rear wheels; operated by foot-pedal

Steering brake: Operated by single parts of the divided foot brake pedal; at normal use both parts are connected by a safety bolt

Wheels

Steering wheels: Two at front. Tyres 6,50-16 AS Front 6 ply pneumatics (acc. to DIN 7808); maximum permissible weight on each tyre 620 kp at 3,0 kp/cm², when transporting mounted implements 775 kp; track from 1280 mm to 1880 mm in steps of 100 mm changed by extending front axle; rims 4,50 E x 16

Driving wheels: Two at rear. Tyres 14,9/13-28 AS 6 ply pneumatics (acc. to DIN 7807); maximum permissible weight on each tyre 1535 kp at 1,3 kp/cm², when transporting mounted implements 1675 kp; track 1220-1320-1413-1513-1635-1735-1828-1928mm changed by reversing wheel centres and offset lug type rims; rims W 12 x 28

Wheel base: 1995 mm

SCHLEPPER-PRÜFFELD
Deutz D 50 06,

Test No. 68 - 123

Weights

With power lift, three-point linkage, fullfuel tank and oil, as tested

		without driver	with driver
Weight of tractor without ballast:	Front axle load:	724 kp	734 kp
	Rear axle load :	1209 kp	1270 kp
	Total:	1933 kp	2004 kp

Ballast front: At drawbar tests 11 front weights and 2 frame weights, total including screws and brakets 401 kp

Ballast rear: 18 weights (each appr. 40 kp) per wheel = 1438 kp
water in tyres = 360 kp

		without driver	with driver
Weight of tractor with ballast:	Front axle load:	1194 kp	1200 kp
	Rear axle load :	2938 kp	3002 kp
	Total:	4132 kp	4202 kp

Seat

Make: Klöckner-Humboldt-Deutz AG.,5 Köln-Deutz; pan seat with cushion linked on long rocker beam; height above ground appr. 1150 mm; (optionally upholstered seat with back rest and arm rests, sprung and damped, adjustable acc. to driver's weight)

Number of grease points (whole tractor) : 14

Overall dimensions

Overall length: 3470 mm with three-point linkage
Overall width: 1700 mm at 1320 mm track, without ballast weights
Overall height: 1740 mm to the top of the back rest of attendant's seat
Maximum ground clearance: 430 mm above center line of tractor
420 mm apart median plane of tractor

Lighting equipment: Electric 12 Volt, acc. to StVZO (German lighting regulation) additionally head-light main beam

	Height above ground of centre mm	Dimensions of area mm	Distance from outside edge of tractor to centre mm
Head lights	890	130 Ø	694
Side lights	1340	47 x 50	148
Rear lights	1250	47 x 50	158
Reflectors	1060	85 Ø	72

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No. 68 - 123

FUELS AND LUBRICANTS USED IN TESTS

Laboratory tests

Fuel:	Shell Diesel oil, specific gravity at 15°C: 0,828 kg/l (commercially available quality acc.to DIN 51 601)
Engine oil:	Shell Rotella HD 20 B
Transmission oil:	SAE 90

Track tests

Fuel:	Shell Diesel oil, specific gravity at 15°C: 0,828 kg/l (commercially available quality acc.to DIN 51 601)
Engine oil:	Shell Rotella HD 20 B
Transmission oil:	SAE 90

SCHLEPPER-PRÜFFELD
Deutz D 50 06,

Test No. 68 - 123

COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE

Date and location of tests: 7.6.1968, Darmstadt-Kranichstein

Type of dynamometer: Schenck hydraulic dynamometer U1-30

Maximum power

Horsepower (metric) hp	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption specific g/hph	hph/l
At maximum power - 2 hours test					
44,2	2300	600	9,65	181	4,58
At standard p.t.o.speed (540 rev/min)					
41,5	2070	540	8,72	174	4,76
At the speed recommended by the manufacturer for drawbar work					
44,2	2300	600	9,65	181	4,58
Fuel consumption at part loads					
(i) 85% of torque at maximum power					
38,0	2340	610	8,49	184	4,48
(ii) unloaded					
-	2420	632	2,90	-	-
(iii) 50% of the load defined in (i)					
19,3	2370	617	5,43	233	3,56
(iv) maximum power					
44,2	2300	600	9,65	181	4,58
(v) 25% of the load defined in (i)					
9,7	2390	623	4,10	351	2,36
(vi) 75% of the load defined in (i)					
28,8	2355	614	7,00	201	4,12

No load maximum engine speed: 2420 rev/min

Torque*) at maximum power: 13,8 kpm

Maximum torque*) 15,0 kpm at 1670 rev/min of the engine

Mean atmospheric conditions: temperature: 21°C
pressure: 751 mm Hg
relative humidity: 46%

Maximum temperatures: coolant: not recorded
engine oil: 90°C
fuel: 22°C

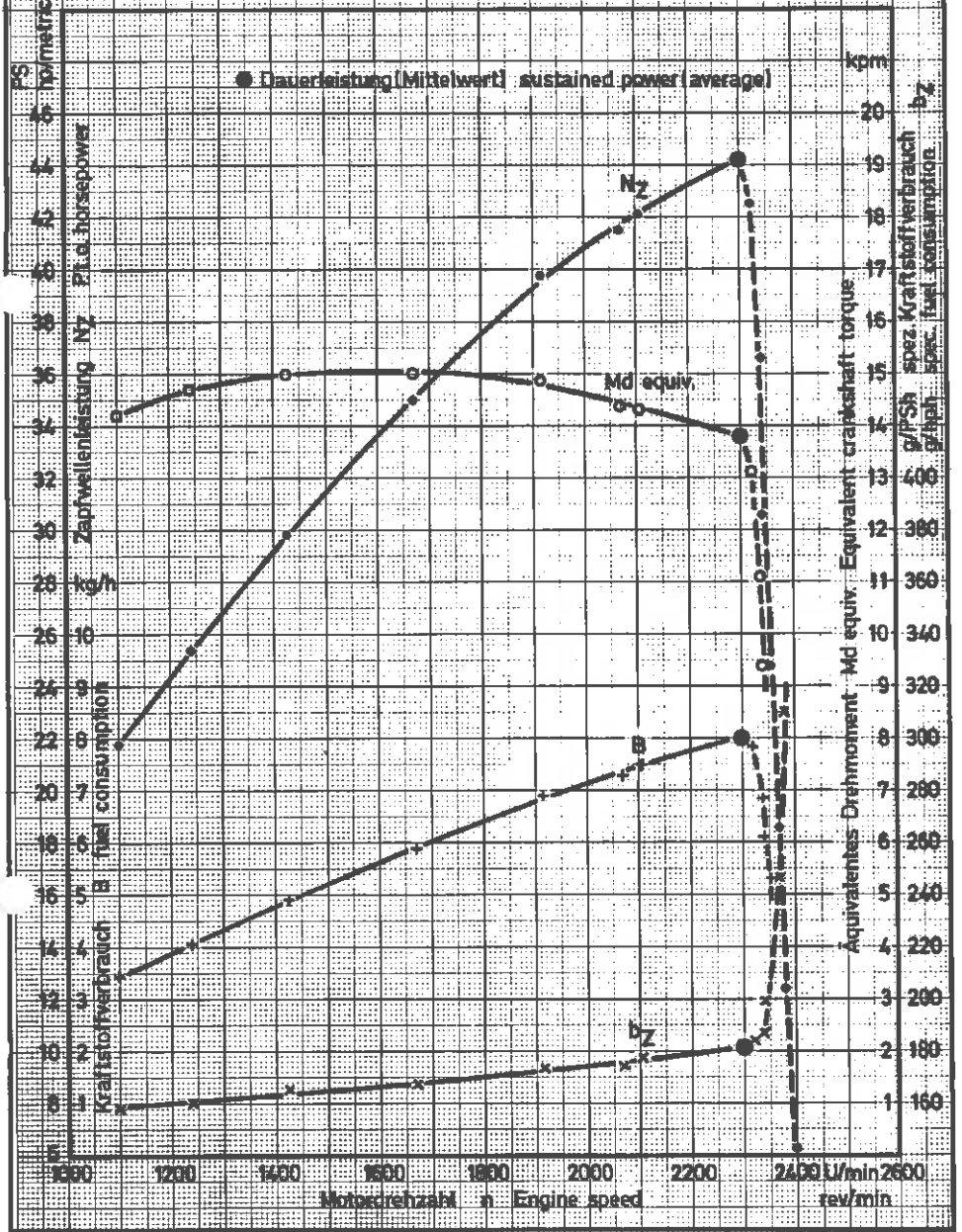
*) The torque reported is the equivalent crankshaft torque

Prüfungs-Abteilung

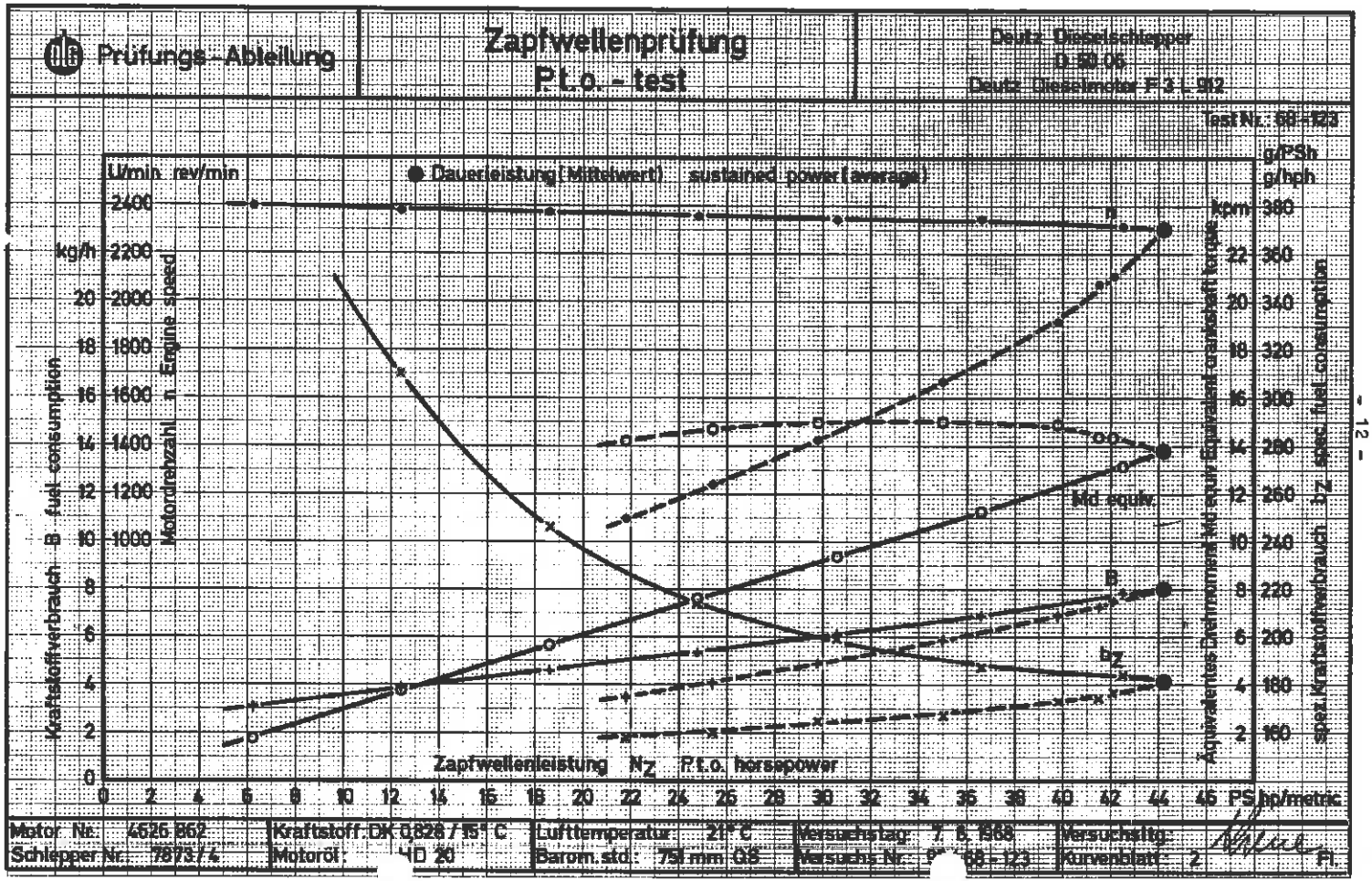
Zapfwellenprüfung
P.t.o. - test

Deutz Dieselschlepper
D 50.06
Deutz Dieselmotor F 3 L 912

Test Nr.: 68-123



Motor Nr.: 4626 662	Motoröl: HD 20	Versuchstag: 7. 6. 1968	Versuchsltg.:	
Schlepper Nr.: 7873 / 4	Lufttemperatur: 21° C	Versuchs Nr.: 927 68 - 123		
Kraftstoff: DK 0 8287 / 15° C	Barom. std.: 751 mm QS	Kurvenblatt: 1		FL.


Prüfungs-Abteilung
Zapfwellenprüfung
P.t.o. - test
Deutz Dieselschlepper
D 80.06
Deutz Dieselmotor F 3 L 912
Test Nr. 68-123
U/min rev/min
Dauerleistung (Mittelwert) sustained power (average)
kg/h
Kraftstoffverbrauch B fuel consumption
Motordrehzahl n Engine speed
kpm
Drehmoment M Engine torque
g/PSh
g/hph
spez. Kraftstoffverbrauch b spec. fuel consumption
Md equiv.
B
bZ
Zapfwellenleistung Nz P.t.o. horsepower
PS hp/metric
Motor Nr. 4526 862
Schlepper Nr. 7873/4
Kraftstoff: DK 0,828 / 15° C
Motoröl: HD 20
Lufttemperatur: 21° C
Barom. std.: 751 mm QS
Versuchstag: 7. 6. 1968
Versuchs Nr.: P 68-123
Versuchsltg:
Kurvenblatt: 2
Fl.

(2) DRAWBAR PERFORMANCE

Date of tests: September 1968

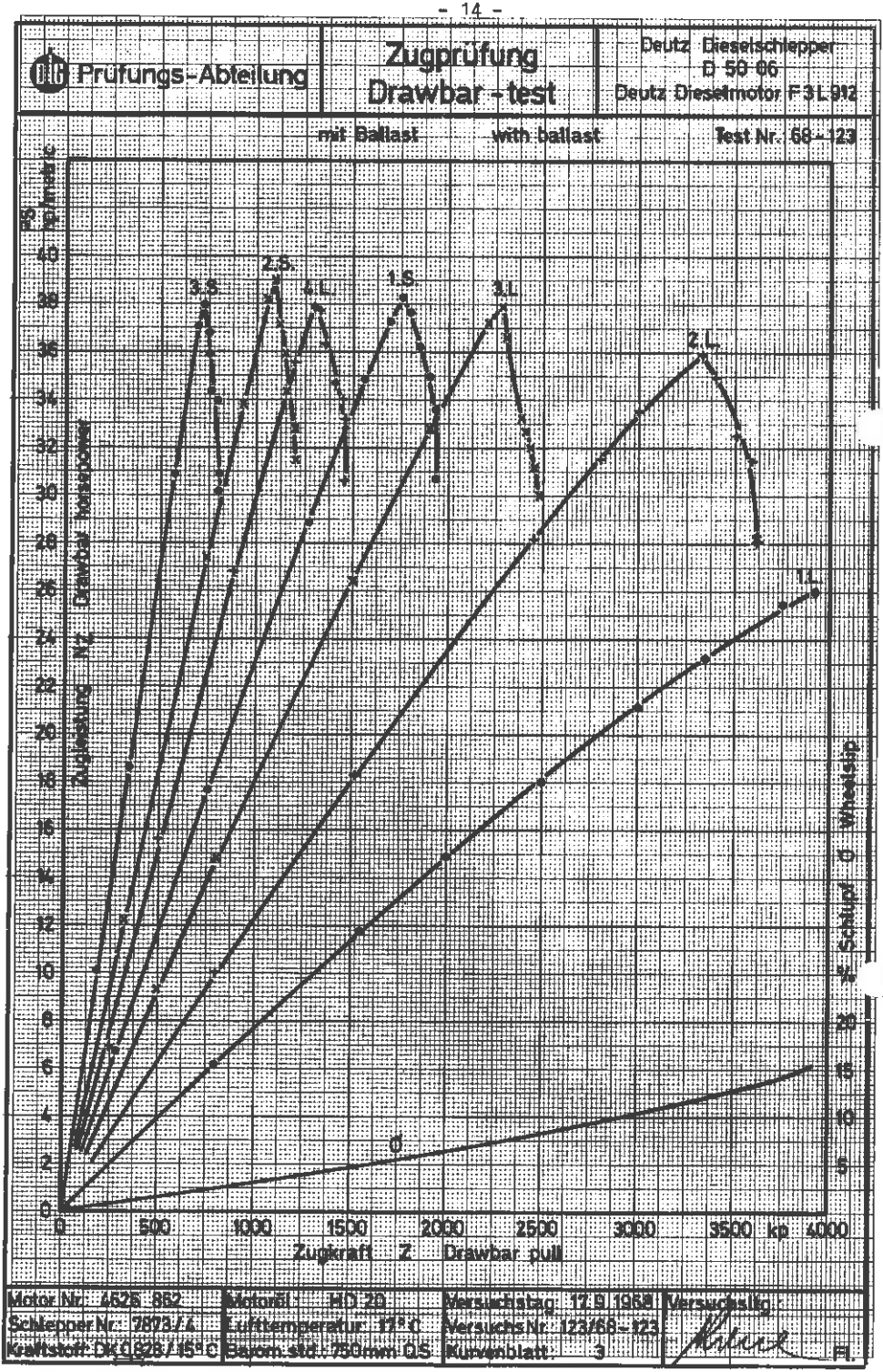
Type of track: concrete

Height of drawbar above ground: 500 mm

With ballast

Gear No. and Group	Horse-power (metric) hp	Drawbar pull kp	Engine speed rev/min	Slip of wheels %	Specific work hph/l	Specific fuel consumpt. g/hph	Temperatures Fuel °C	Coolant °C	Engine oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure mm Hg
(i) MAXIMUM POWER												
1.L.	26,0	3920	2350	15,5	3,28	254	10	not rec.	75	11	96	754
2.L.	35,9	3330	2304	11,8	3,71	224	10	not rec.	76	11	97	754
3.L.	37,9	2280	2295	7,2	3,91	212	18	not rec.	79	18	75	750
1.S.	38,3	1760	2300	5,5	3,95	209	18	not rec.	80	18	74	750
4.L.	37,9	1300	2302	4,1	3,91	212	14	not rec.	78	13	96	750
2.S.	39,0	1100	2300	3,3	4,02	206	18	not rec.	80	19	72	750
3.S.	38,0	724	2300	1,7	3,92	211	18	not rec.	82	19	75	750
(ii) FIVE-HOUR-TEST AT 75% OF PULL AT MAXIMUM POWER IN THE 1.S. GEAR												
1.S.	29,5	1320	2345	4,8	3,78	219	19	not rec.	80	19	82	751
(iii) FIVE-HOUR-TEST AT PULL CORRESPONDING TO 15% WHEEL SLIP IN TEST (i)												
1.L.	26,0	3920	2350	15,0	3,28	254	17	not rec.	78	17	75	751
Without ballast												
(v) MAXIMUM POWER												
2.L.	20,3	1850	2360	15,4	2,87	290	22	not rec.	75	23	75	749
3.L.	29,3	1850	2345	15,5	3,18	260	19	not rec.	75	20	75	749
1.S.	35,8	1750	2300	13,3	3,69	224	16	not rec.	78	14	98	747
4.L.	37,8	1325	2300	8,0	3,90	212	22	not rec.	80	21	80	747
2.S.	39,4	1120	2300	6,3	4,06	204	22	not rec.	80	22	74	747
3.S.	39,2	750	2300	4,6	4,03	205	22	not rec.	80	21	78	747

Engine oil consumption during ten hours duration of tests (ii) and (iii) : 24 g/h

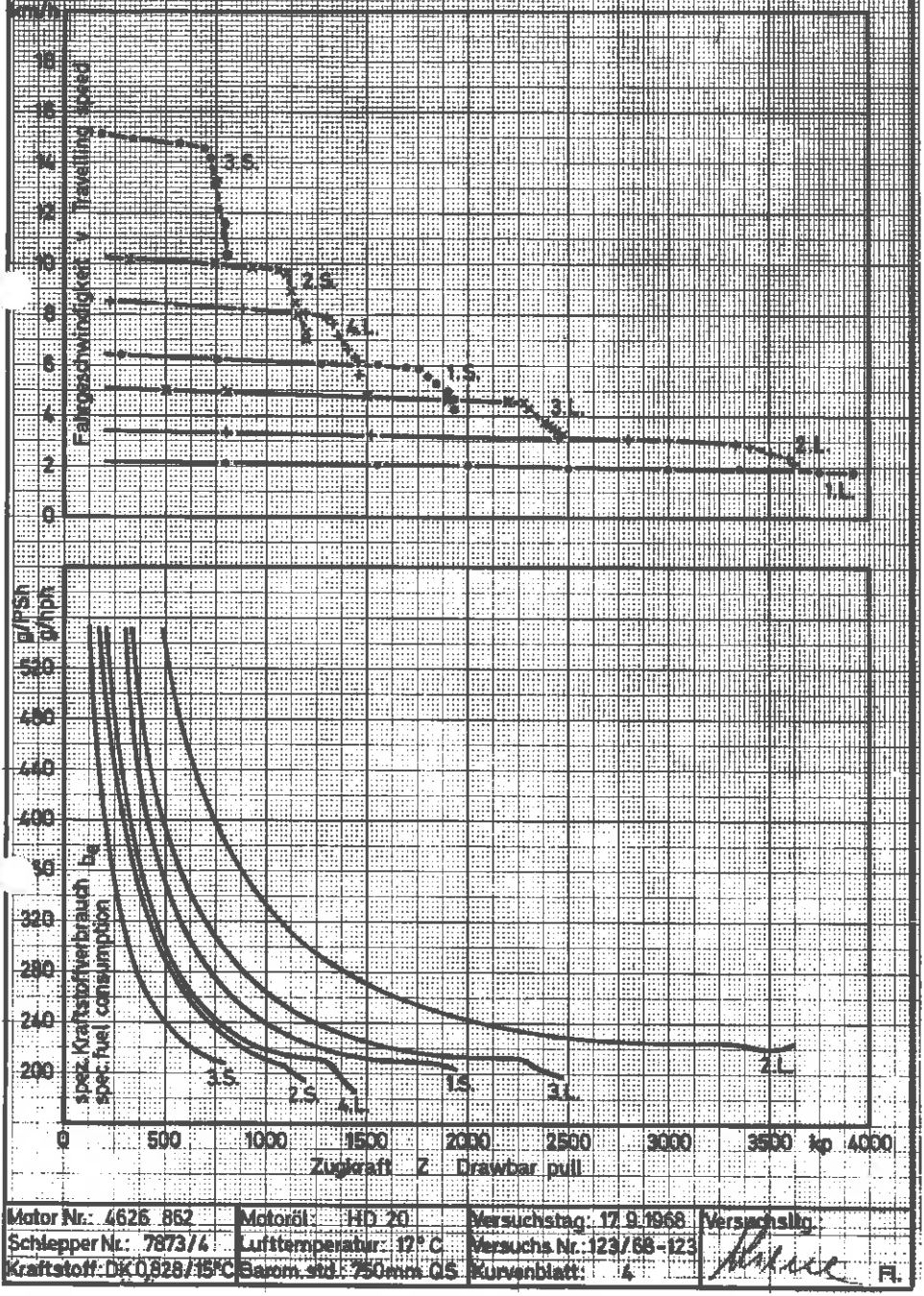

Prüfungs-Abteilung
Zugprüfung
Drawbar - test
Deutz Dieselschlepper
D 50 06
Deutz Dieselmotor F 3 L 912
mit Ballast
with ballast
Test Nr. 68 - 123
3.S.
2.S.
4.L.
1.S.
3.L.
2.L.
1.L.
0
Drehzahl
Revs
Drawbar horsepower
Zugleistung
PS
Wheelslip
Schlupf
%
0
500
1000
1500
2000
2500
3000
3500
kp
4000
Zugkraft Z
Drawbar pull
Motor Nr. 4525 882
Schlepper Nr. 7873 / A
Kraftstoff: DK 0,828 / 15° C
Motoröl: HD 20
Lufttemperatur: 11° C
Barom. std.: 750 mm QS
Versuchstag: 17.9.1968
Versuchs Nr. 123/68 - 123
Kurvenblatt: 3
Versuchsltg.
Fl.

Prüfungs-Abteilung

Zugprüfung
Drawbar - test

Deutz Dieselschlepper D 50 06
Deutz Dieselmotor F 5 L 912

mit Ballast with ballast Test Nr. 63 - 123



Motor Nr.: 4626 862	Motoröl: HD 20	Versuchstag: 17.9.1968	Versuchsltg.:
Schlepper Nr.: 7873/4	Lufttemperatur: 17° C	Versuchs Nr.: 123/68-123	
Kraftstoff: DIN 0,828/15°C	Barom. std.: 750mm QS	Kurvenblatt: 4	Fl.

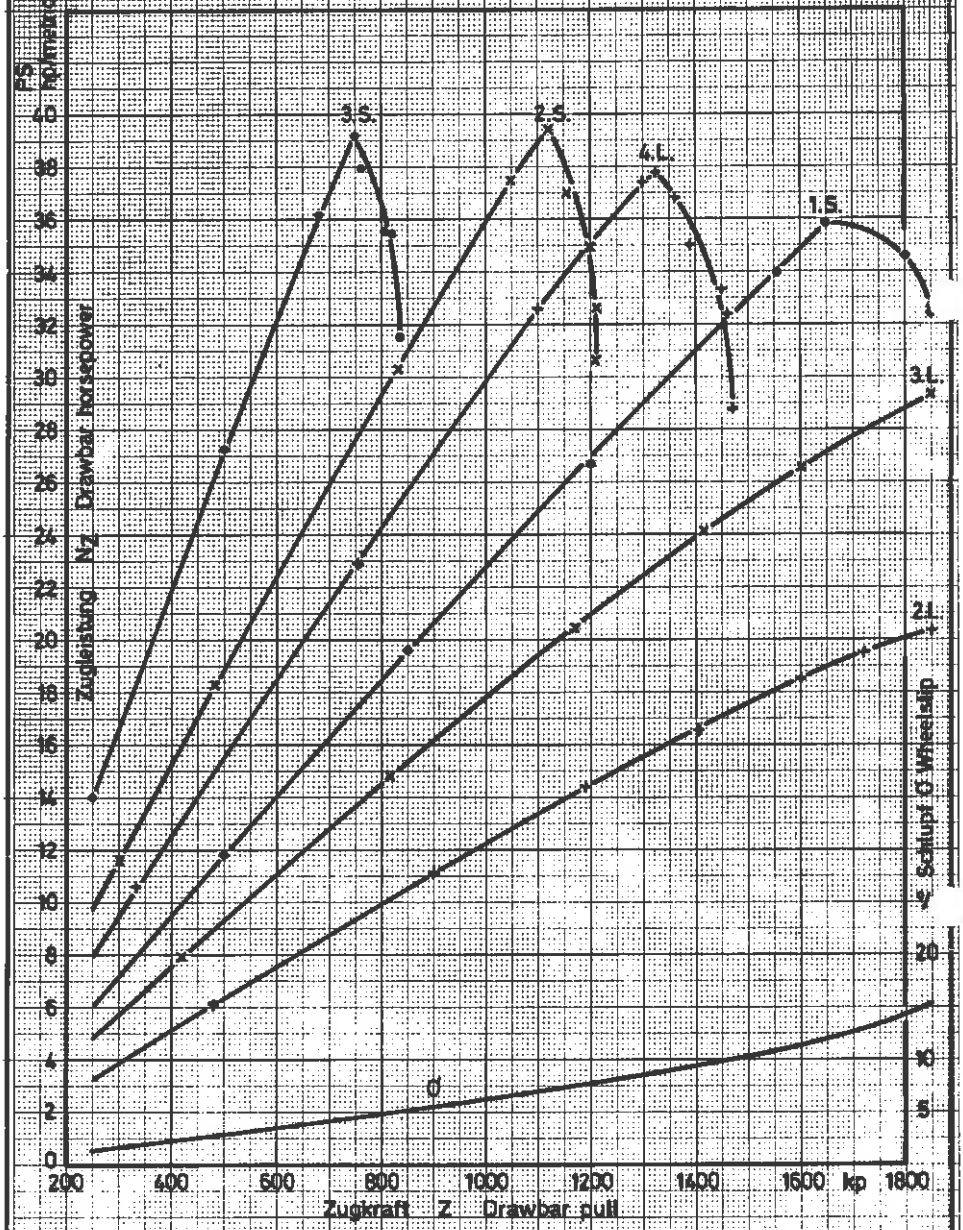
DLG Prüfungs-Abteilung

Zugprüfung
Drawbar-test

Deutz Dieselschlepper D 50 06
Deutz Dieselmotor F 3 L 912

ohne Ballast — without ballast

Test Nr.: 68-123



Motor Nr.: 4626 862	Motoröl: HD 20	Versuchstag: 10.9.1968	Versuchsltg.:
Schlepper Nr.: 7873/4	Lufttemperatur: 20° C	Versuchs Nr.: 115/68-123	
Kraftstoff: DK 0,828 / 15° C	Barom. std.: 748 mm QS	Kurvenblatt: 5	Fl.

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No. 68 - 123

(3 and 4) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 6,50-16 AS Front, 6 ply, without ballast
rear: 14,9/13-28 AS, 6 ply, without ballast

Track of wheels front: 1280 mm
rear: 1220 mm

	With brakes		Without brakes	
	left-hand	right-hand	left-hand	right-hand
Radius of turning space	6,7 m	6,8 m	7,5 m	7,5 m
Radius of turning circle	6,5 m	6,4 m	7,2 m	7,0 m

(5) LOCATION OF CENTRE OF GRAVITY

	Without ballast
Height above ground	711 mm
Distance forward from the vertical plane containing the axis of the rear wheels	732 mm
Distance from the median plane of the tractor	0 mm

SCHLEPPER-PRÜFFELD
Deutz 50 06

Test No. 68 - 123

(6) BRAKE TESTS

A) FOOT BRAKE

Date of test: 16.9.1968

Type of track: concrete

Type of decelerometer: IFK Brake Recorder, August Fischer K.G. 34 Göttingen

Travelling speed of tractor: 24,5 km/h

With cold brakes

		Tractor without ballast	Tractor with ballast
Maximum deceleration	m/s^2	4,3	5,2
Stopping distance	m	6,0	5,3
Force on pedal	kp	37	66

Brake fade characteristics, hot tests, tractor without ballast

Deceleration: hot/cold 96%

Stopping distance: cold/hot 91%

Force on pedal: cold/hot 109%

B) PARKING BRAKE

Force applied on the brake lever, cold brake 18 kp.
No rotation of the rear-wheels of tractor occured when the tractor has been towed.

Force applied on the brake lever, hot brake 18 kp.
One hour after the brake has been applied no rotation of the rear-wheels of tractor occured when the tractor has been towed.

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No 68 - 123

(7) MEASUREMENT OF THE AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 13.9.1968
Type of track: concrete
Type of sound level meter: EZGN, Rohde & Schwarz, 8 München

Results of test

Speed: 4.S.
Travelling speed before acceleration: 24,5 km/h
Sound level: dBA 86,5

(8) NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of test: 13.9.1968
Type of track: concrete
Type of sound level meter: EZGN, Rohde & Schwarz, 8 München
Type of octavfilter: PBO, Rohde & Schwarz, 8 München

No cab fitted on tractor

Results of tests

Gear	Travelling speed *) nominal km/h	real km/h	Sone
4.L.	8,20	7,95	112
1.S.	5,88	6,30	113

*) The first gear tested corresponds to the travelling speed nearest to 7,25 km/h.

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No. 68 - 123

(9) TEST OF POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date and location of tests: 12.7.1968, Darmstadt-Kranichstein

Hydraulic fluid: Shell Rotella HD 20 engine oil

POWER LIFT Category I

Height above ground in down position hitch point mm	test frame mm	Total vertical movement mm	Maximum force exerted through full lift range kp	Pressure of hydr. oil kp/cm²	Linkage load at which unballasted front end of tractor lifts off the ground kp
Measured at the hitch points of lower links					
139	-	659	1540	175	1495
375	-	563	1690	175	1495
Measured at the test frame 610 mm to the rear of the hitch points					
139	148	711	1300	175	900
375	346	645	1200	175	900

POWER LIFT Category II

Height above ground in down position hitch point mm	test frame mm	Total vertical movement mm	Maximum force exerted through full lift range kp	Pressure of hydr. oil kp/cm²	Linkage load at which unballasted front end of tractor lifts off the ground kp
Measured at the hitch points of lower links					
34	-	770	1320	175	1495
255	-	735	1350	175	1495
Measured at the test frame 610 mm to the rear of the hitch points					
34	18	842	1160	175	900
255	260	840	1080	175	900

Type of linkage lock for transport: mechanically in upwars direction,
hydraulically in downwards direction

Opening pressure of the cylinder over pressure relief valve: 210-260 kp/cm²
(not tested, manufacturer's specification)

PUMP CHARACTERISTICS

(i) opening pressure of relief valve: 178 kp/cm²
sustained pressure by the open relief valve: 175 kp/cm²

(ii) Pump delivery rate at external tapping
at minimum pressure: 29,0 l/min
at maximum hydraulic power: 28,0 l/min
maximum hydraulic power: 10,6 hp (metric)
delivery pressure: 170 kp/cm²

SCHLEPPER-PRÜFFELD
Deutz D 50 06

Test No. 68 - 123

OPTIONAL TESTS

(10) ENGINE TESTS

Date and location of tests: 31.5.1968, Darmstadt-Kranichstein

Type of dynamometer: Schenck hydraulic dynamometer U1-20

Maximum power

Horsepower (metric) hp	Engine speed rev/min	Fuel consumption total l/h	Fuel consumption specific g/hph	hph/l
At maximum power 2-hours test				
46,6	2300	9,65	171	4,82
At standard p.t.o.speed (540 rev/min)				
43,4	2070	8,75	167	4,96
At the speed recommended by the manufacturer for drawbar work				
46,6	2300	9,65	171	4,82
Fuel consumption at part loads				
(i) 85% of torque at maximum power				
40,4	2340	8,43	173	4,79
(ii) unloaded				
-	2420	2,75	-	-
(iii) 50% of the load defined in (i)				
20,5	2385	5,31	214	3,85
(iv) maximum power				
46,6	2300	9,65	171	4,82
(v) 25% of the load defined in (i)				
10,3	2395	3,89	313	2,65
(vi) 75% of the load defined in (i)				
30,4	2360	6,86	186	4,43

Optimum fuel consumption: 159 g/hph at 22,3 hp and 1140 rev/min

Standard fuel consumption 1/2 (acc. to DIN 9606) : 4,02/8,00 l/h

No load maximum engine speed: 2420 rev/min

Torque at maximum power: 14,52 kpm

Maximum torque: 15,75 kpm at 1671 rev/min of the engine

Mean atmospheric conditions: temperature: 27°C
pressure: 752 mm Hg
relative humidity: 38%

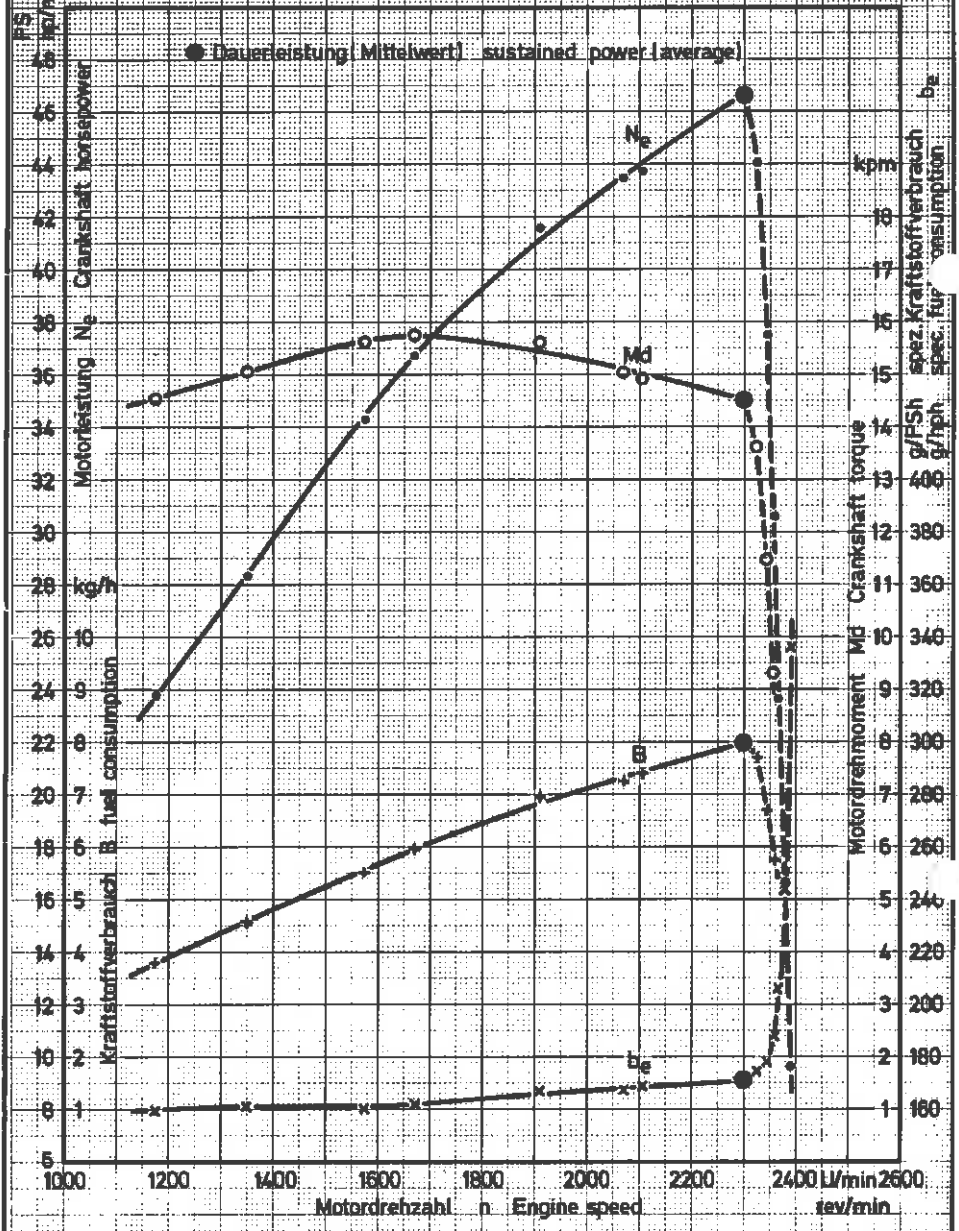
Maximum temperatures: coolant: not recorded
engine oil: 80°C
Fuel: 24°C

Prüfungs-Abteilung

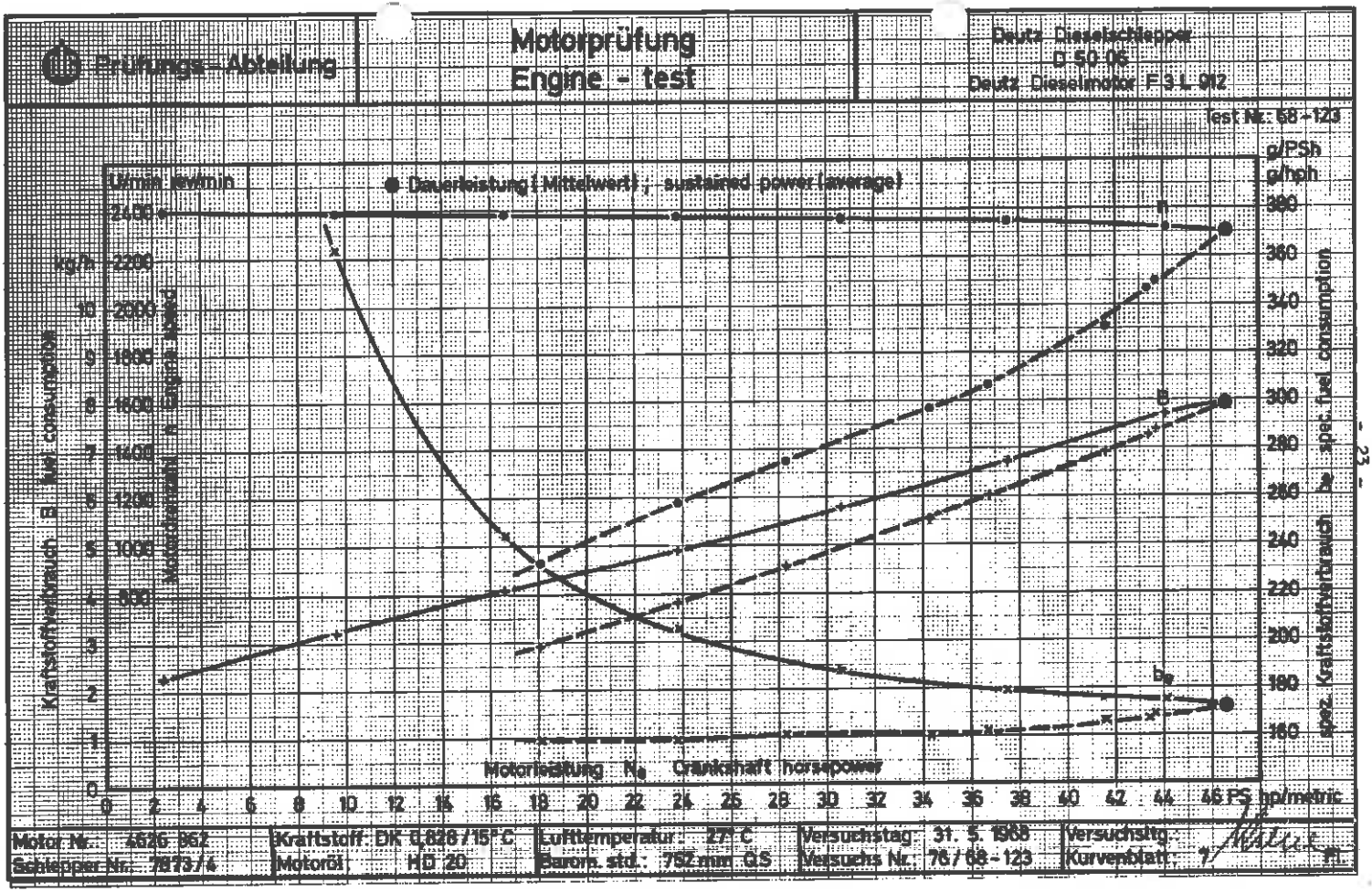
Motorprüfung
Engine - test

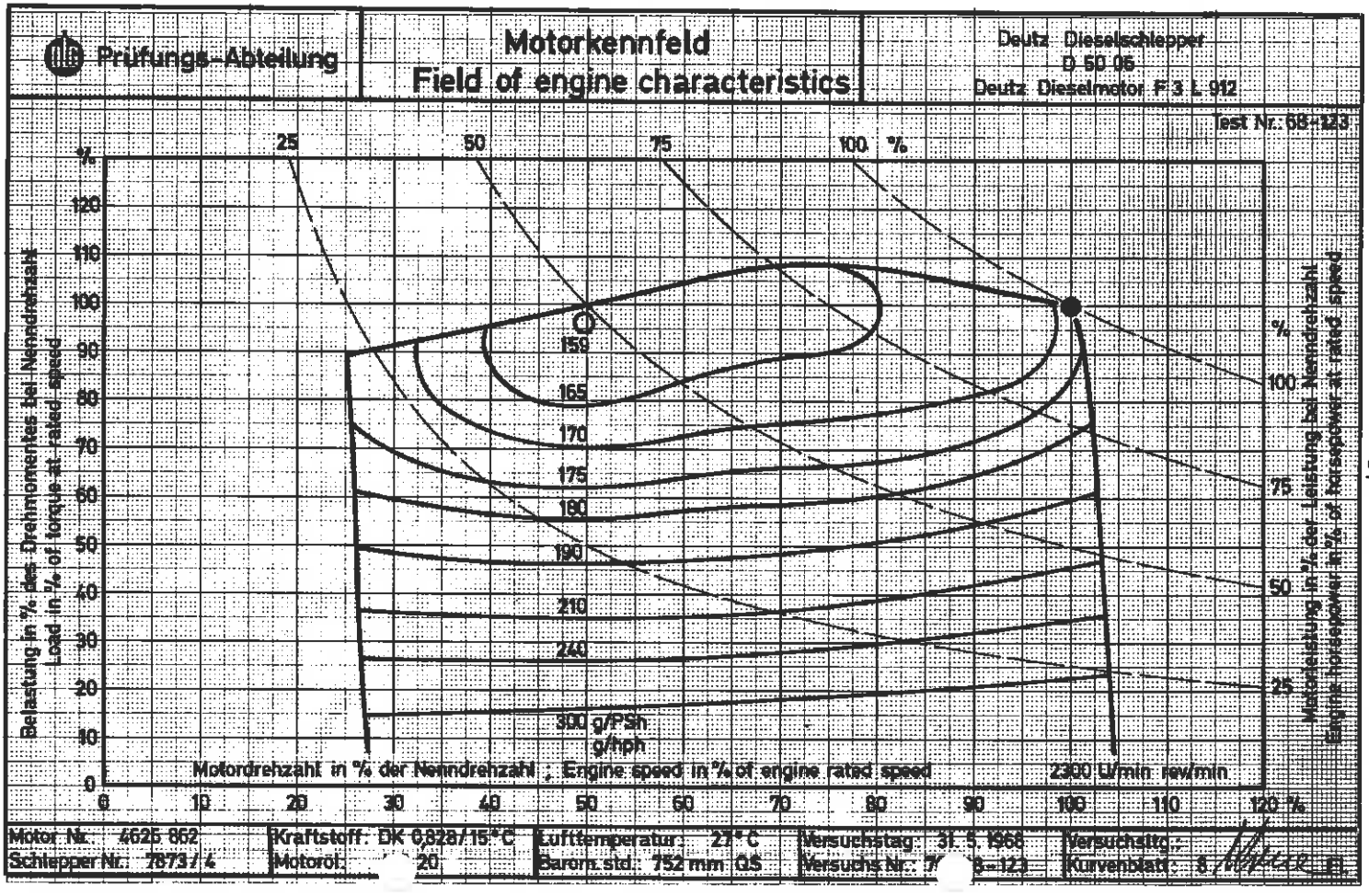
Deutz Dieselschlepper
D 50 06
Deutz Dieselmotor F 3 L 912

Test Nr.: 68+123



Motor Nr.: 4526 862	Motoröl: HD 20	Versuchstag: 31. 5. 1968	Versuchsltg.:
Schlepper Nr.: 7873/4	Lufttemperatur: 27° C	Versuchs Nr.: 76/68+123	
Kraftstoff: DK 0,828/15° C	Barom.std.: 752mm QS	Kurvenblatt: 6	Fl.


Prüfungs-Abteilung
Motorprüfung
Engine - test
Deutz Dieselschlepper
D 50.05
Deutz Dieselmotor F 3 L 912
Test Nr.: 68 - 123
U/min rev/min
Dauerleistung (Mittelwert) - sustained power (average)
g/PSh
g/hph
kg/h
Kraftstoffverbrauch B - fuel consumption
Motordrehzahl n - engine speed
spezifischer Kraftstoffverbrauch be - specific fuel consumption
Motorleistung Ne Crankshaft horsepower
PS hp/metric
Motor Nr.: 4626 962
Schlepper Nr.: 7873/4
Kraftstoff: DIN 0,828/15° C
Motoröl: HD 20
Lufttemperatur: 27° C
Baromm. std.: 752 mm QS
Versuchstag: 31. 5. 1968
Versuchs Nr.: 76/68 - 123
Versuchsltg.:
Kurvenblatt: 7


Prüfungs-Abteilung
Motorkennfeld
Field of engine characteristics
Deutz Dieselschlepper
D 50 06
Deutz Dieselmotor F 3 L 912
Test Nr.: 68-123
Belastung in % des Drehmomentes bei Nenndrehzahl
Load in % of torque at rated speed
Motordrehzahl in % der Nenndrehzahl ; Engine speed in % of engine rated speed
2300 U/min rev/min
Motorleistung in % der Leistung bei Nenndrehzahl
Engine horsepower in % of horsepower at rated speed
159
165
170
175
180
190
210
240
300 g/PSh
g/hph
Motor Nr. 4625 862
Schlepper Nr. 7873 / 4
Kraftstoff: DK 0,828/15 °C
Motoröl: 20
Lufttemperatur: 27° C
Barom. std.: 752 mm QS
Versuchstag: 31. 5. 1968
Versuchs Nr.: 68-123
Versuchsltg.:
Kurvenblatt: 8