28 S.

O.E.C.D.-No. 417
Printed: March 1973
see page 2

Report on test in accordance with
O.E.C.D. STANDARD CODE for the Official Testing
of Agricultural Tractors



DEUTZ-AGRICULTURAL TRACTOR D 80 06

P.t.o.-power 82 PS

Manufactured by: Klöckner-Humboldt-Deutz AG
D-5000 Köln-Deutz

Date of Tests: June till August 1972

DLG-Testing Station for Agricultural Machinery
D-6114 Groß Umstadt

DEUTSCHE-LANDWIRTSCHAFTS GESELLSCHAFT e.V.
Prüfungsabteilung für Landmaschinen
D-6000 Frankfurt/Main 1, Zimmerweg 16

This bulletin is based on engineering tests in accordance with the O.E.C.D. STANDARD-CODE for the Official Testing of Agricultural Tractors. It does not contain an evaluation of the performance of the tractor on practical work.

This report has been approved by the O.E.C.D. Co-ordinating Center (C.N.E.E.M.A., France) as being in accordance with the O.E.C.D. STANDARD-CODE.

Date of Approval: 5th February 1973

Serial No.: 417

This tractor D 80 06 has already been subject to an O.E.C.D.-tractor test No. 331 in 1970.

Because of changing

(i) manufacturer's production setting of the injection pump affecting the tractor's performance

(ii) the power lift

retesting has been necessary

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Printed in Germany

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PRÜFUNGS-ABTEILUNG
Deutz D 80 06

Test No. 72-70

Tractor manufacturer: Klöckner-Humboldt-Deutz AG
D-5000 Köln-Deutz

Submitted for test by: Manufacturer

Selected by: Manufacturer with agreement by DLG

Place of running-in: Köln and Groß Umstadt

Duration of running-in: Engine appr. 50 hours
Tractor appr. 50 hours

SPECIFICATION OF TRACTOR

Tractor

Make: Klöckner-Humboldt-Deutz AG
Model: D 80 06
Type: Wheel type tractor, unit construction
rear wheel driven

Serial No: 7932/1633

Engine

Make: Klöckner-Humboldt-Deutz AG
Model: F 6 L 912
Type: 4-stroke Diesel engine, direct injection
air cooled
Serial No: 5019903

Cylinders: 6 in line, bore 100 mm, stroke 120 mm,
capacity 5652 cm³, compression ratio 17:1
replaceable ribbed single cylinders
overhead valves

Fuel system: Feed pump incorporated in injection pump
BOSCH distributor injection pump
EP/VA 6/100 H 1050 CR 168
manufacturer's production setting 45 mm³/stroke at
rated engine speed and full load
injection timing 30° before TDC
BOSCH multihole injection nozzles DLLA 149 S 394
injection pressure 175 kp/cm²
BOSCH dual fuel filter with replaceable cartridges
capacity of fuel tank appr. 120 l

Governor: hydraulically acting variable speed type governor
incorporated in injection pump
governed range of engine speed 700 to 2240 rev/min
rated engine speed 2100 rev/min

PRÜFUNGS-ABTEILUNG

Deutz D 80 06 Test No. 72-70

Air cleaner	DEUTZ-SICCOPUR dry filter pre-cleaner incorporated
Exhaust silencer:	Heinrich Gillet KG 3-chamber expansion type silencer 125 x 225 mm oval, 726 mm long at the left hand side of tractor median plane mouth showing upwards
Lubrication system:	Forced feed from gear type pump strainer in sump MANN oil filter with replaceable cartridge oil capacity 14 l oil changing period 200 to 240 hours recommended oil viscosity: winter SAE 10 W summer SAE 20 W/20 tropics SAE 30
Cooling system:	Air cooling V-belt driven axial blower
Starting system:	Electrical BOSCH starter motor JD-12 V 4 PS BOSCH flame glowing plug in intake pipe
Electrical equipment:	12 Volt, negative earth BOSCH 3-phase generator G 1 - 14 V 28 A 20 1 lead acid battery 143 Ah at 20 hours rating

Transmission

Clutch:	Lamellen- und Kupplungsbau GmbH dry dual disc type clutch DH 327/310 operated by 2-step foot pedal
Gear box:	Zahnradfabrik Friedrichshafen AG T-3201 with ZF easy shifting device speed change gear with 6 forward speeds group gear with 2 forward and 1 reverse group, 6th speed of speed change gear is locked in reverse group creep speed group for 1st and 2nd speed of speed change gear in both forward and reverse group total 16 forward and 7 reverse speeds

PRÜFUNGS-ABTEILUNG

Deutz D 80 06

Test No. 72-70

Rear axle and final drive:	Crown wheel and pinion bevel gear type differential differential lock fitted pedal operated, self-disengaging planetary final drive, outboard mounted
Oil capacity:	Gear box with rear axle drive 36 l planetary gears 6,5 l each
Oil changing period:	1000 hours

Total ratio and speeds see page 7

Power take-off

Live p.t.o., manually engaged
2 speeds engageable
at rear in median plane of tractor
595 mm above ground
29 x 34,9 x 8,7 mm; 6 splines = 1 3/8"
(DIN 9611 Form A; BS. 1495; ASAE S. 203.5)

low speed p.t.o.
590 rev/min at rated engine speed
standard p.t.o. speed 540 rev/min at
1928 rev/min engine speed

high speed p.t.o.
1075 rev/min at rated engine speed
standard p.t.o. speed 1000 rev/min at
1954 rev/min engine speed

both standard speeds may be set by aid of tractormeter
direction of rotation for both speeds clockwise
(viewed from tractor rear)

Belt pulley

(Not fitted on tractor tested, figures acc. to manufacturer's specification)
driving device attached to p.t.o. shaft
engaged by p.t.o. hand lever
280 mm diameter, 220 mm width
760 or 1390 rev/min at rated engine speed
linear belt speed 11,15 or 20,37 m/s
direction of rotation anticlockwise
(viewed from the right hand side of tractor)

PRÜFUNGS-ABTEILUNG
Deutz D 80 06

Test No. 72-70

Group gear 1	Group gear 2	Speed change gear No	Number of engine revolutions for one revolution of the driving wheel	Theoretical travelling speed at rated engine speed of 2100 rev/min km/h	Theoretical travelling speed at rated engine speed of 2100 rev/min m/s
Forward speeds					
Creep group	slow	1	626,2 : 1	0,90	0,251
		2	399,4 : 1	1,42	0,394
	fast	1	484,9 : 1	1,17	0,325
		2	309,3 : 1	1,83	0,509
Normal group	slow	1	255,1 : 1	2,22	0,617
		2	162,7 : 1	3,48	0,967
		3	104,9 : 1	5,40	1,500
		4	68,05: 1	8,33	2,313
		5	42,68: 1	13,27	3,687
		6	26,96: 1	21,01	5,837
	fast	1	197,5 : 1	2,87	0,797
		2	126,0 : 1	4,50	1,249
		3	81,22: 1	6,98	1,938
		4	52,69: 1	10,75	2,987
		5	33,04: 1	17,15	4,763
		6	26,96: 1	27,15	7,541
Reverse speeds					
Creep group	reverse	1	488,0 : 1	1,16	0,322
		2	311,2 : 1	1,82	0,506
Normal group	reverse	1	198,8 : 1	2,85	0,792
		2	126,8 : 1	4,47	1,241
		3	81,77: 1	6,93	1,925
		4	53,04: 1	10,68	2,967
		5	33,27: 1	17,03	4,730

PRÜFUNGS-ABTEILUNG
Deutz D 80 06

Test No. 72-70

Power lift	Klöckner-Humboldt-Deutz AG K 45.2 DEUTZ-TRANSFERMATIC system hydraulic power lift, unit construction power control, position control, floating position single acting main ram external single acting auxiliary ram overpressure relief valve for ram adjusted at 210 to 260 kp/cm² BOSCH gear type pump, 19 cm³/rev delivery 0510 615 305 directly driven by engine DEUTZ control valve maximum oil pressure 175 kp/cm² up to 5 oil tappings with max. 3 additional DEUTZ control valves available, 1 single and 2 dual acting or vice versa hydraulic linkage lock for transport oil capacity 36 l in the gear box and rear axle housing oil changing period 1500 hours
Implement linkage	Three point linkage, category II (DIN 9674) operated by power lift lower links with 2 holes for fixing lifting rods, 570 and 610 mm distance from pivot point lifting rods length adjustable from 755 to 890 mm lifting range above ground from 55 to 955 mm depending on lifting rods length and working point
Drawbar	Fitted on clevis of lower links centre hole and 4 holes on either side 80 mm distance each all holes 33 mm diameter height above ground adjustable in the range between 55 and 995 mm depending on lifting rods length in the standard height of 450 mm above ground with lifting rods length 890 mm mechanically lockable with lower links in horizontal position distance of centre hole: from rear axle centre 1025 mm from the end of p.t.o. shaft 700 mm

Trailer hitch
Height above ground 800 or 850 mm
changeable by shifting hitch
hitch hole 32 mm diameter
distance from rear axle centre 885 mm
permissible supporting force 1150 kp

Towing hitch
Height above ground 775 mm

Steering
Zahnradfabrik Friedrichshafen AG
ZF-hydrostatic steering 7409
operated by steering wheel

Brakes

Parking brake:
Maschinenbau Knott
internal simplex shoe type brakes
mechanically acting on drums on the differential shafts
operated by hand lever with ratchet

Foot brake:
Maschinenbau Knott
internal servo shoe type brakes
hydraulically acting on drums on the differential shafts
pedal operated

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

Wheels

Steering wheels:
Two pneumatics at front
7,50 - 20 AS Front 6 ply (DIN 7808)
maximum permissible weight on each tyre 850 kp
at 2,5 kp/cm² inflation pressure
when transporting mounted implements 1063 kp
track width in steps of 100 mm from 1425 to 1925 mm changeable by extending front axle

rims 5,50 F x 20

Driving wheels: Two pneumatics at rear
18.4/15-30 AS 8 ply (DIN 7807)
maximum permissible weight on each tyre 2415 kp at 1,4 kp/cm²
when transporting mounted implements 2777 kp
track width 1514-1614-1729-1829-1923-2023 mm changeable by reversing wheel centres and offset lug type rims

rims W 14 L x 30

Wheel base: 2550 mm

Weights — Ready for use, without cab as tested

		without driver	with driver
Weight of tractor without ballast:	Front	1012 kp	1018 kp
	Rear	1990 kp	2059 kp
	Total	3002 kp	3077 kp
Front ballast:	8 front weights 45 kp each		360 kp
Rear ballast:	13 weights per wheel 59 kp each		1534 kp
	water in the tyres		523 kp
Weight of tractor with ballast:	Front	1464 kp	1469 kp
	Rear	3955 kp	4025 kp
	Total	5419 kp	5494 kp

Seat: Grammer
DS 20 D 3 H
upholstered mould seat with back and arm rests
adjustable spring and shock absorber
height above ground 1460 mm in median position
distance of back rest from centre hole of drawbar adjustable from 895 to 1155 mm

Cab: Optional available
(fitted for noise tests only)
FRITZMEIER-cab

Number of grease points (whole tractor) 14

Overall dimensions

Overall lenght:	4190 mm with three-point linkage
Overall width:	2255 mm at 1514 mm track, without ballast
Overall height:	2400 mm to top of exhaust pipe
Maximum ground clearance:	385 mm in median plane of tractor

Lighting equipment Electric
12 Volt
acc. to German Govt. regulations additional with main head light beam

	Dimensions of area mm	Height above ground to centre mm	Distance from outside edge of tractor to centre mm
Head lights	130 ø	1110	966
Side lights *)	150 x 55	1760	195
Rear lights **)	150 x 55	1540	250
Reflectors	75 ø	1195	150

*) in combination with direction indicator

**) in combination with direction indicator and stop light

FUELS AND LUBRICANTS USED IN TESTS

Laboratory tests

Fuel:	ARAL Diesel oil (DIN 51 601) commercially available quality specific gravity at 15°C: 0,829 kg/l
Engine oil:	SHELL-Rotella HD 20
Transmission oil:	SAE 90

COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE (low speed p.t.o.)

Date of tests: 7th June 1972
Type of dynamometer: Schenck hydraulic dynamometer U1-40

Maximum power

Horse-power PS	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption specific g/PSh	Specific energy PSh/l
At maximum power 2-hour test					
82,3	2100	590	17,78	179	4,63
At standard p.t.o. speed (540 rev/min)					
80,5	1928	540	16,79	173	4,79
At the speed recommended for drawbar work					
82,3	2100	590	17,78	179	4,63
Part loads					
(i) 85 % of torque at maximum power					
70,9	2128	596	15,51	182	4,57
(ii) unloaded					
-	2212	619	4,82	-	-
(iii) 50 % of the load defined in (i)					
36,4	2181	611	9,76	223	3,73
(iv) maximum power					
82,3	2100	590	17,78	179	4,63
(v) 25 % of the load defined in (i)					
18,4	2205	617	7,20	326	2,55
(vi) 75 % of the load defined in (i)					
53,5	2147	601	12,74	193	4,2

No load maximum engine speed: 2212 rev/min
Eqivalentcrankshaft torque at maximum power: 28,1 kpm
Maximum equivalent crankshaft torque: 33,3 kpm at 1235 rev/min of the engine

Mean atmospheric conditions: temperature 23 °C
pressure 745 mm Hg
relative humidity 60%

Maximum temperatures: coolant not recorded
engine oil 82 °C
fuel 25 °C

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MAIN POWER TAKE-OFF PERFORMANCE (high speed p.t.o.)

Date of tests: 8th June 1972
Type of dynamometer: Schenck hydraulic dynamometer U1-40

Maximum power

Horse-power PS	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption specific g/PSh	Specific energy PSh/l
At maximum power 2-hour test					
82,8	2100	1075	17,69	177	4,68
At standard p.t.o. speed (1000 rev/min)					
81,5	1954	1000	17,06	174	4,78
At the speed recommended for drawbar work					
82,8	2100	1075	17,69	177	4,68

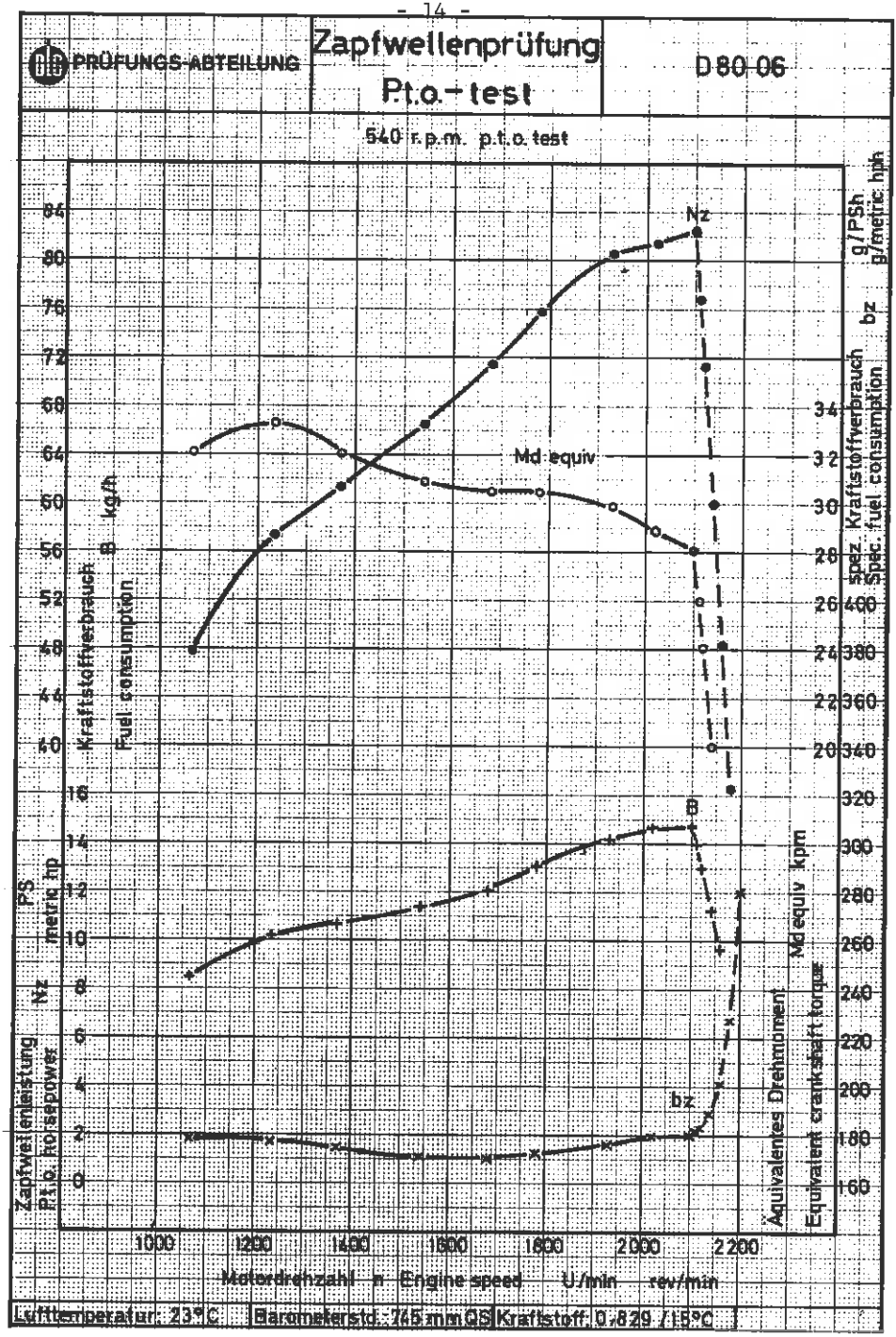
Part loads

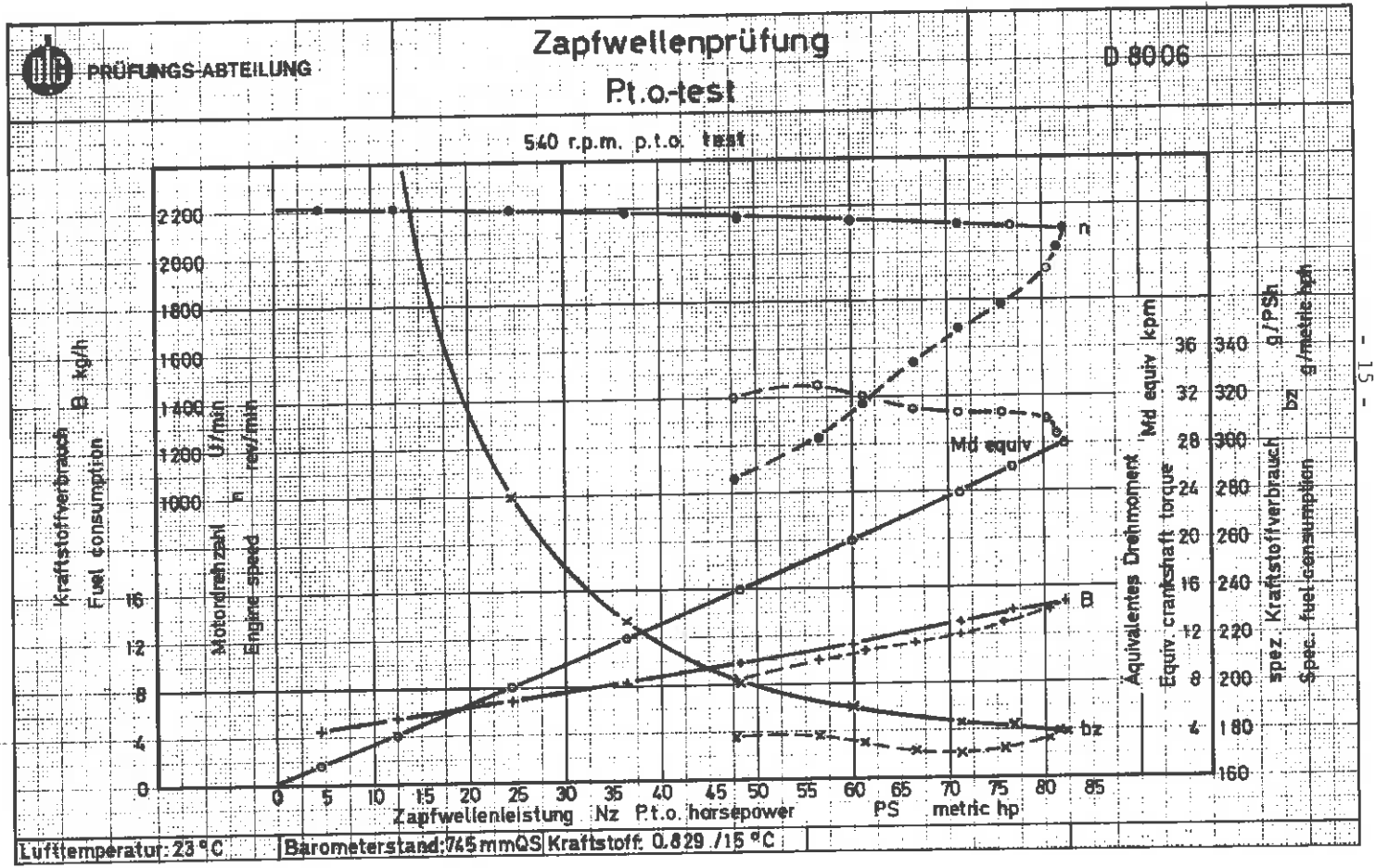
(i) 85 % of torque at maximum power					
71,2	2126	1088	15,44	180	4,61
(ii) unloaded					
-	2212	1132	4,84	-	-
(iii) 50 % of the load defined in (i)					
36,4	2173	1112	9,85	225	3,69
(iv) maximum power					
82,8	2100	1075	17,69	177	4,68
(v) 25 % of the load defined in (i)					
18,4	2197	1124	7,35	335	2,50
(vi) 75 % of the load defined in (i)					
53,7	2143	1097	12,64	195	4,25

No load maximum engine speed: 2212 rev/min
Equivalent crankshaft torque at maximum power: 28,2 kpm
Maximum equivalent crankshaft torque: 33,3 kpm at 1235 rev/min of the engine

Mean atmospheric conditions:
temperature 23°C
pressure 751 mm Hg
relative humidity 67 %

Maximum temperatures:
coolant not recorded
engine oil 73°C
fuel 26°C


PRÜFUNGS-ABTEILUNG
Zapfwellenprüfung
P.t.o.-test
D 80 06
540 r.p.m. p.t.o. test
Nz
Md equiv
bz
Kraftstoffverbrauch B kg/h
Fuel consumption
spez. Kraftstoffverbrauch bz g/PSh
Spec. fuel consumption g/metric hph
Zapfwellenleistung Nz PS metric hp
P.t.o. horsepower
Äquivalentes Drehmoment Md equiv kpm
Equivalent crankshaft torque
Motordrehzahl n Engine speed U/min rev/min
1000
1200
1400
1600
1800
2000
2200
Lufttemperatur: 23°C
Barometerstd.: 745 mm QS
Kraftstoff: 0,829 / 15°C


PRÜFUNGS-ABTEILUNG
Zapfwellenprüfung
P.t.o.-test
D 8006
540 r.p.m. p.t.o. test
Kraftstoffverbrauch B kg/h
Fuel consumption
Motordrehzahl n U/min
Engine speed n rev/min
Aquivalentes Drehmoment Md equiv kpm
Equiv. crankshaft torque
spez. Kraftstoffverbrauch bz g/PSh
Spec. fuel consumption g/metric hph
n
Md equiv
B
bz
Zapfwellenleistung Nz P.t.o. horsepower PS metric hp
Lufttemperatur: 23 °C
Barometerstand: 745 mmQS
Kraftstoff: 0.829 /15 °C

PRÜFUNGS-ABTEILUNG
Deutz D 80 06

(2) DRAWBAR PERFORMANCE

Date of test: 3rd till 7th July 1972
Type of track: concrete

Gear No. and Group	Speed km/h	Horse-power PS	Drawbar pull kp	Engine speed rev/min	Slip of wheels %	Specific energy PSh/l
(i) MAXIMUM POWER with ballast height of drawbar above ground 510 mm						
1 cr slow	0,81	16,1	5380	2204	15,0	2,04
1 cr fast	1,07	21,3	5370	2199	15,0	2,42
2 cr slow	1,24	24,7	5370	2191	14,9	2,56
2 cr fast	1,59	31,7	5380	2176	15,0	2,89
1 slow	1,93	38,5	5380	2163	15,0	3,15
1 fast	2,51	50,0	5380	2141	14,9	3,48
2 slow	3,01	59,9	5370	2121	14,9	3,58
2 fast	3,97	66,2	4500	2100	11,8	3,75
3 slow	4,88	68,3	3780	2098	9,5	3,87
3 fast	6,52	68,8	2850	2100	6,9	3,89
4 slow	7,82	68,9	2380	2100	5,7	3,90
4 fast	10,22	68,9	1820	2097	4,3	3,90
5 slow	12,85	69,5	1460	2102	3,4	3,93
5 fast	16,65	67,2	1090	2103	2,6	3,83
(ii) FIVE-HOUR-TEST at 75 % of pull at maximum power in 3rd gear of slow group						
3 slow	5,11	53,8	2840	2135	6,8	3,78
(iii) FIVE-HOUR-TEST at pull corresponding to 15 % wheel slip in test (i)						
2 slow	-	-	5380	2120	-	-
(v) MAXIMUM POWER without ballast height of drawbar above ground 510 mm						
2 fast	3,89	46,5	3230	2138	15,0	3,45
3 slow	4,64	55,5	3230	2121	15,0	3,59
3 fast	6,10	66,6	2950	2098	12,8	3,75
4 slow	7,49	67,4	2430	2105	9,7	3,79
4 fast	9,93	68,0	1850	2100	7,2	3,82
5 slow	12,60	69,1	1480	2100	5,3	3,89
5 fast	16,40	68,6	1130	2102	4,0	3,86

Total oil consumption during ten hours duration of tests (ii) and (iii): 62 g/h

Test No. 72-70

Specific fuel consumpt. g/PSh	Temperatures Fuel °C	Coolant °C	Engine oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure mm Hg
407	22	-	85	20	80	755
342	22	-	86	20	74	755
324	23	-	86	20	72	754
287	23	-	87	21	68	754
263	23	-	88	22	68	754
240	25	-	88	22	65	751
232	25	-	88	25	65	751
221	24	-	90	23	65	752
214	24	-	88	23	70	752
213	23	-	87	23	68	752
212	20	-	88	22	70	753
212	20	-	89	21	72	753
211	20	-	87	22	72	753
218	20	-	87	22	75	752
219	22	-	85	21	63	750
-	23	-	85	22	62	750
241	21	-	87	20	76	749
231	21	-	85	19	78	749
221	20	-	85	20	80	748
219	20	-	86	19	82	748
217	19	-	86	19	82	748
213	18	-	85	18	80	747
215	18	-	85	18	81	747

Test (iii) was carried out with additional ballast, the results for power, slip, speed and fuel consumption have no practical significance

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 7,50-20 AS Front, 6 ply
rear : 18,4/15-30 AS, 8 ply
Track of wheels front: 1425 mm
rear: 1514 mm

	With brakes left-hand m	With brakes right-hand m	Without brakes left-hand m	Without brakes right-hand m
Radius of turning space	4,00	4,05	4,40	4,53
Radius of turning circle	3,85	3,90	4,30	4,38

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	mm	850
Distance forward from the vertical plane containing the axis of the rear wheels	mm	852
Distance of the median plane of the tractor to the left hand side	mm	11

PRÜFUNGS-ABTEILUNG
Deutz D 80 06 Test No. 72-70

(5) BRAKING PERFORMANCE

A) FOOT BRAKE

Date of tests: 23th August, 1972
Type of track: concrete
Type of decelerometer: MOTO METER-Bremsverzögerungs- und Pedalkraftschreiber

Weight of ballasted tractor: 5494 kp with driver

Cold brakes

		with ballast	without ballast
Travelling speed	km/h	25,0	25,0
Deceleration	m/s²	4,5	4,5
Stopping distance	m	5,6	5,6
Force on pedal	kp	64	51
Force on pedal to achieve a deceleration of 2,5 m/s²	kp	28	20

Brake fade characteristics (hot tests)

			with ballast	without ballast
Deceleration	hot/cold	%	100	100
Stopping distance	cold/hot	%	103	93
Force on pedal	cold/hot	%	116	88

B) PARK BRAKE

Tractor facing up slope:
Pull on hand brake 18 kp, tractor does not roll

Tractor facing down slope:
Pull on hand brake 14 kp, tractor does not roll

(6) AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 23th August, 1972
Type of track: concrete
Type of sound level meter: Brüel and Kjaer type 2203

Results of test

Gear: 6th fast
Travelling speed before acceleration: 20,3 km/h
Sound level 89 dBA

(7) NOISE AT THE DRIVER'S EAR LEVEL

Date of tests: 22th August, 1972
Type of track: concrete
Type of sound level meter: Brüel and Kjaer type 2203
Type of frequency analyser: Brüel and Kjaer type 1613 (fitted with octave filter)

No cab or frame fitted on tractor

Results of tests

Gear	Drawbar pull at which the tractor develops the maximum sound level kp	Travelling speed nominal km/h	Travelling speed effective km/h	Sound level dBA	Sone
2 fast	2490	4,5	3,9	93	
3 slow	2470	5,4	4,6	94	
3 fast*)	2450	7,0	6,0	95	89
4 slow	2290	8,3	7,5	95	
4 fast	1640	10,7	10,1	95	
5 slow	1340	13,3	12,8	95	
5 fast	1020	17,1	16,6	94	
6 slow	760	21,0	20,9	95	

*) The 3rd fast gear corresponds to the travelling speed nearest to 7,25 km/h

PRÜFUNGS-ABTEILUNG
Deutz D 80 06

Test No. 72-70

(7) NOISE AT THE DRIVER'S EAR LEVEL

A FRITZMEIER-cab is optional available (see page 10)

For the time being this cab is not yet tested as a safety cab under O.E.C.D. conditions

Date of tests: 21th August, 1972
Type of track: concrete
Type of sound level meter: Brüel and Kjaer type 2203
Type of frequency analyser: Brüel and Kjaer type 1613
(fitted with octave filter)

Results of tests

Gear	Drawbar pull at which the tractor develops the maximum sound level kp	Travelling speed nominal km/h	Travelling speed effective km/h	Sound level dBA	Sone
2 fast	3060	4,5	3,7	94	
3 slow	3100	5,4	4,5	95	
3 fast *)	2660	7,0	6,1	96	93
4 slow	2550	8,3	7,2	100	87
4 fast	2000	10,7	9,3	97	98
5 slow	1570	13,3	11,9	98	102
5 fast	1190	17,1	15,8	96	
6 slow	960	21,0	19,7	99	114

*) The 3rd fast gear corresponds to the travelling speed nearest to 7,25 km/h

(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date of tests: 12th June, 1972

POWER LIFT

	Height above ground in down position		Vertical movement	Maximum force excerted throughout the full lift range	Oil pressure	Lifting force when front of tractor lifts
	hitch points mm	test frame mm	mm	kp	kp/cm²	kp
Lifting rods fixed on lower links in 570 mm distance from pivot points linkage giving maximum mechanical advantage						
At hitch points	335	-	660	3265	176	2535
On the frame	90	130	680	2955	176	1590
Linkage giving minimum mechanical advantage						
At hitch points	90	-	725	3085	176	2535
On the frame	335	333	707	2755	176	1590
Lifting rods fixed on lower links in 610 mm distance from pivot points linkage giving maximum mechanical advantage						
At hitch points	380	-	610	3605	176	2535
On the frame	115	158	642	3105	176	1590
Linkage giving minimum mechanical advantage						
At hitch points	115	-	685	3295	176	2535
On the frame	380	380	655	2775	176	1590

PRÜFUNGS-ABTEILUNG
Deutz D 80 06

Test No. 72-70

PUMP CHARACTERISTICS

(i)	Opening pressure of relief valve in the remote circuit:	182 kp/cm²
	sustained pressure by the open relief valve:	176 kp/cm²
(ii)	Pump delivery rate at minimum pressure and rated engine speed	43,0 l/min
(iii)	Pump delivery rate:	40,6 l/min
	delivery pressure:	160 kp/cm²
	power:	14,45 PS