Report on test in accordance
with O.E.C.D. STANDARD CODE

O.E.C.D. No. 959



Agricultural Tractor
DEUTZ-FAHR DX 7.10 (4WD)
Type denomination D 1028 A-S

Manufacturer
Klöckner-Humboldt-Deutz AG
D-5000 Köln-Deutz

Deutsche Landwirtschafts-Gesellschaft e. V.
Zimmerweg 16 · D-6000 Frankfurt a. M. 1
Telefon: (069) 7168-0 · Telex: 0413185 dlg-d

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

Duration of Tests: January till April 1985
DLG-Testing-Station for Agricultural Machinery, Max-Eyth-Weg 1,
D-6114 Groß-Umstadt

This report has been approved by the O.E.C.D. Coordinating Centre (C.E.M.A.G.R.E.F., France) as being in accordance with the O.E.C.D. STANDARD CODE.

Date of Approval: 18th September 1985 O.E.C.D. No. 959

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 daN = 10 N	=	1,02 kp	or 1 kp	= 0,981 daN
Powers	1 kW	=	1,36 PS	or 1 PS	= 0,736 kW
Pressures	1 bar	=	1,02 kp/cm²	or 1 kp/cm²	= 0,981 bar
	1000 mbar	=	750,10 mm Hg		

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

Printed in the Federal Republic of Germany
October 1985: DLG-No. 208

TABLE OF CONTENTS

	Page
SPECIFICATION OF TRACTOR *)	4 to 15
TEST CONDITIONS	16 and 17
COMPULSORY TESTS	
(1) Main power take-off performance	18 to 21
(2) Drawbar performance on a concrete track	22 and 23
(3) Turning space and turning circle	24
(4) Location of centre of gravity	24
(5) Braking	25
(6) Measurement of external noise level	26
(7) Noise measurement at the driver's ear	26
(8) Power lift test and hydraulic power test	27
OPTIONAL TESTS	
(9) Engine performance	28 to 31

*) All stated dimensions refer to tyre sizes 18.4 - 26 at front and 20.8 - 38 at rear, as well as to track widths 1846 mm at front and 1800 mm at rear

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10 Test No. 85-10

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 and tractor appr. 180 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	DEUTZ-FAHR
Trade name:	DX 7.10
Type denomination:	D 1028 A-S
Type:	Four-wheel-drive tractor, unit construction
Serial No.:	7643 0005
Start of series:	7643 0001

Engine

Make:	DEUTZ
Model:	BF6L 913, version 118/2
Type:	Supercharged 4-stroke Diesel engine, direct injection, air cooled
Serial No.:	689 4826
Cylinders:	6, in-line, bore 102 mm, stroke 125 mm, displacement 6128 cm^3, compression ratio 15,5/1; replaceable ribbed cylinder liners
Valves:	Overhead
Fuel system:	BOSCH fuel feed pump; BOSCH in-line injection pump; PES 6A 85D 410 RS 2591, serial no.: 44102310; manufacturer's production setting 76,5±1 mm^3/stroke at rated engine speed and full load; injection timing $30^{\circ}+1^{\circ}$ before TDC; BOSCH multihole injection nozzles DLLA 149S 775, injection pressure 220+8 bar; PUROLATOR fuel filter PER-247-F, replaceable; 2 fuel tanks with totally 255 l capacity
Governor:	BOSCH centrifugal variable speed governor with manifold-pressure compensator RSV 325-1150 A8C 2020 L; governed range of engine speed 650 to 2540 1/min, rated engine speed 2400 1/min

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10 Test No. 85-10

Supercharger:	exhaust driven turbo supercharger KÜHNLE, KOPP UND KAUSCH K27-3060 G/16.21 maximum supercharge pressure 0,88 bar
Air cleaner:	DEUTZ-SICCOPUR dry paper element filter with precleaner, replaceable cartridge, maintenance pilot lamp, air intake above bonnet
Exhaust silencer:	WALKER single chamber-absorption type silencer, 120 x 230 mm oval, 1090 mm long; on the left beside the bonnet, mouth showing upwards; mouth 2870 mm above ground
Lubrication system:	Forced feed from gear pump; strainer in sump; PUROLATOR oil filter in full flow with by-pass valve and replaceable cartridge; cartridge change every 500 operating hours; oil capacity 18,5 l; specified oil quality API-CD, oil change period 250 operating hours specified oil viscosities: below - 5°C SAE 10W from -10°C to +10°C SAE 20W/20 from + 5°C to +30°C SAE 30 over +25°C SAE 40 or over -10°C SAE 15W/40; oil cooler at right side of engine at engine's cooling air baffle
Cooling system:	Air cooling with axial blower driven by V-belt and fluid coupling, blower speed controlled by exhaust gas temperature
Starting system:	Electrical; gear shift lever in neutral position as safety device; BOSCH solenoid pre-engaged-drive-starting motor JD 12 V 3,7 kW; BOSCH flame plug in intake manifold, electrically actuated additional injection volume during start
Electrical equipment:	12 Volt, negative earth; BOSCH 3 phase alternator K1 14V 65A21 910 W; 1 lead acid battery 143 Ah at 20 hours rating

Transmission

Clutch:	LUK single-acting dry double plate clutch A 2031; 310 mm ∅, by pedal hydraulically actuated and hydraulic power-assisted
Gear box:	STEYR-DAIMLER-PUCH TW 1310-S synchronized speed change gear with 4 speeds; synchronized range gear with 3 forward ranges (L, M, H) and 1 reverse range (R); 2 gear shift levers; optionally available additional power shift range (Hi/Lo) and collar shifted creep group (LL); shifting by 2 push-buttons (Hi/Lo) and additional shift lever; tested tractor fitted with Hi/Lo, in this version total 24 forward speeds and 8 reverse speeds
Rear axle and final drives:	STEYR-DAIMLER-PUCH bevel gear drive; bevel gear differential with lock, electrically-hydraulically actuated by pedal switch, not selfdisengaging, with pilot lamp; planetary final drives
Front axle and final drives:	ZF APL 3052 driven by universal joint shaft on the left hand side of gearbox; wet multi-plate clutch shiftable under load by push-button; bevel gear drive; No Spin-differential OPTITRAC; planetary final drives

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

Total ratios and speeds

Range	Gear	Total ratio engine : driving wheel		Nominal travelling speed *) at rated engine speed	
		Hi	Lo	Hi	Lo
L	1	253,09	317,56	3,06	2,44
	2	180,24	226,15	4,29	3,42
	3	130,82	164,14	5,91	4,71
	4	93,92	117,85	8,24	6,56
M	1	152,06	190,79	5,09	4,05
	2	108,29	135,87	7,14	5,69
	3	78,60	98,62	9,84	7,84
	4	56,43	70,80	13,71	10,93
H	1	69,65	87,39	11,11	8,85
	2	49,60	62,23	15,60	12,43
	3	36,00	45,17	21,49	17,13
	4	25,85	32,43	29,92	23,85
R	1	146,42	183,71	5,28	4,21
	2	104,27	130,83	7,42	5,91
	3	75,68	94,96	10,22	8,15
	4	54,34	68,18	14,24	11,35

With creep group LL (not fitted on tested tractor)

L	1	2137,23	0,36
	2	1522,05	0,51
	3	1104,71	0,70
	4	793,13	0,98
M	1	1284,02	0,60
	2	914,43	0,84
	3	663,70	1,16
	4	476,50	1,62
H	1	588,13	1,32
	2	418,84	1,85
	3	304,00	2,54
	4	218,26	3,55
R	1	1236,41	0,63
	2	880,53	0,88
	3	639,09	1,21
	4	458,83	1,69

*) calculated with the radius index 855 mm

Lubrication: Forced feed from gear pump;
oil filter with replaceable cartridge,
cartridge change every 1000 operating hours
or when warning lamp lights up;
oil cooler at engine's cooling air baffle

	Oil quality API-	Oil viscosity SAE	Oil capacity l	Oil change h
gear box with rear axle and final drives	CC or CD	15W/40	78	2000
front axle drive	GL5	90	9	1000
final drives at front	GL5	90	1,0 each	1000

Main p.t.o. Independent,
wet STEYR-DAIMLER-PUCH multi-plate clutch,
hydraulically actuated by hand-valve;
1 p.t.o. shaft at rear of tractor, in
tractor's median plane, 713 mm above ground,
shaft end 605 mm behind rear axle centre;
35 mm Ø, 6 splines, ISO 500/DIN 9611, type 1;
optionally available 35 mm Ø, 21 splines,
ISO 500/DIN 9611, type 2;
p.t.o. ratio 2,095 : 1;
p.t.o. standard speed 1000 1/min at engine
speed 2095 1/min, p.t.o. speed 1145 1/min
at rated engine speed;
sense of rotation clockwise, viewed to
tractor's rear

Power lift DEUTZ-FAHR
K 55.2 DEUTZ-TRANSFERMATIC-system;
hydraulic power lift in unit construction;
draft- and position-control both steplessly
mixable, floating position;
lower link sensing,
no lowering throttle;
mechanical-hydraulic linkage lock for transport

Hydraulic system:	Open centre system BOSCH gear type pump HY/ZFS 11/22,5 BL, driven by gear box, independent of clutches, delivery 58 l/min at rated engine speed; oil-filter and -cooler see p. -12- (Steering) DEUTZ-FAHR control valve, relief valve pressure setting 175±8 bar; single acting cylinder with 146 mm stroke and 90 mm bore; safety valve set to 240 bar; 2 single acting HENGSTLER assister rams with 185 mm stroke and 80 mm (optional 65 mm) bore 1 single acting DEUTZ-FAHR additional control valve with oil tapping at rear of tractor; optionally up to 3 single or double acting additional valves available; 1 separate oil return line at rear of tractor hydraulic oil tank with 18,5 l capacity in power lift unit; additional tank with 35 l capacity optionally available; max. 8 l may be taken off (with additional tank max 33 l) stationary or travelling
Hydraulic oil:	Engine oil SAE 20W/20 API-CC or -CD, oil change every 1000 operating hours
Implement linkage:	see pages -10- and -11-

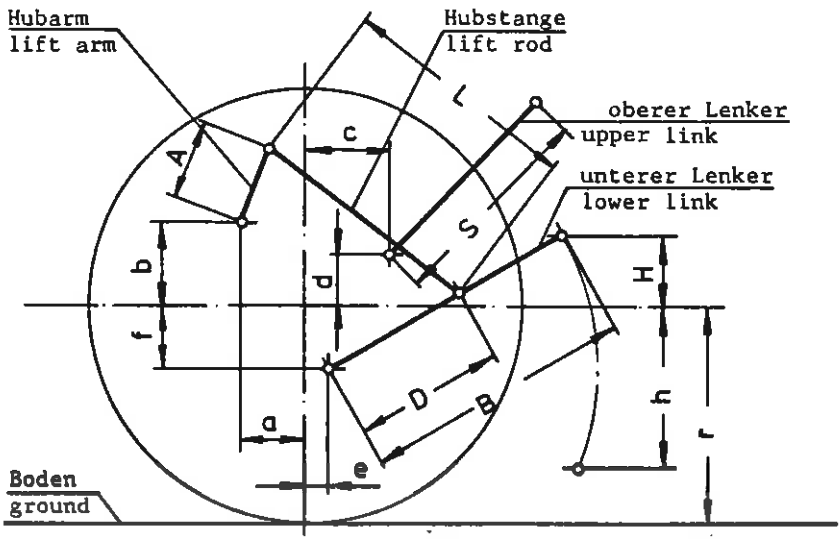
Pull attachment

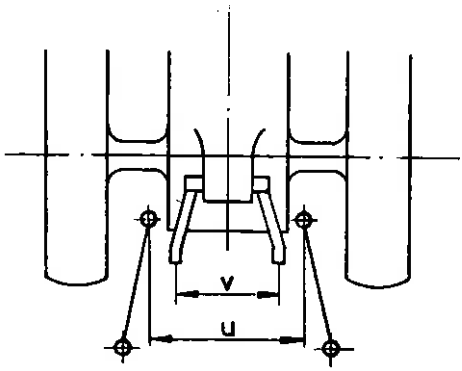
Trailer hitch:	CRAMER KU 758, automatical; pin 30 mm dia; hitch point above ground 845, 865, 895 or 915 mm behind rear axle centre 653 mm above p.t.o. 132, 152, 182 or 202 mm behind p.t.o. shaft end 48 mm permissible vertical load 2000 kg
Swinging drawbar:	Optionally available, not fitted to tested tractor

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

Implement linkage: Three point linkage,
joint ball's category 2 or 3 acc. to
ISO 730/I, DIN 9674,
WALTERSCHEID quick couplers





PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

Dimensions of rear implement linkage (projected lengths, in mm)
underlined dimensions are valid for power lift test page -27-)

Rear tyres (size 20.8 - 38)	radius index	(r)	855
Front tyres (size 18.4 - 26)	radius index	(r')	670
Length of lift arms		(A)	320
Length of lower links		(B)	1008
Distance of lift arm pivot point from rear wheel centre line	horizontally	(a)	-180
	vertically	(b)	475
Horizontal distance between the 2 lower link points		(u)	490
Horizontal distance between the 2 lift arm end points		(v)	610
Length of upper link		(S)	580 to 880, 770
Distance of upper link pivot point from rear wheel centre line	horizontally	(c)	383
	vertically	(d)	92, 142, 192
Distance of lower link pivot point from rear wheel centre line	horizontally	(e)	158
	vertically	(f)	310
Distance of lower link pivot points to lift rod pivot points on lower links		(D)	563 or 620
Length of lift rods		(L)	855 to 955, 931

Height of lower link hitch points relative to rear axle centre line (situated 855 mm above ground) in mm

These data are valid for unloaded power lift

Lift rod length	(L)	931	855		955	
Lift rod pivot point	(D)	563	563	620	563	620
Lowest position	(h)	655	497	451	695	630
Highest position	(H)	25	155	148	3	8
Transport position	(h')	352	192	170	367	337

Holed drawbar:	Short bar length between joint balls 825 mm, thickness 30 mm, width 80 mm 9 holes 33 mm dia with 80 mm distance each; height above ground min. 160 mm max. 1010 mm holes' centres behind p.t.o. shaft end 561 mm (with horizontal lower links)
Towing hitch:	At front, 1035 mm above ground

Steering

ZF, 8493
Hydrostatic
oil in common with power lift;
BOSCH gear pump HY/ZFS 11/14 BL,
directly driven by engine,
delivery 14 cm^3/rev; working pressure 150 bar;
hydraulic oil cooler inside of engine's
cooling air baffle;
replaceable oil filter,
filter change once a year or when warning
lamp lights up;
2 double acting WEBER rams,
250 mm stroke, 50 mm bore, piston rod 22 mm dia,
acting on track arm and track rod

Brakes

Service brake:	GIRLING GOIMPD, pedal operated muscle power brake with hydraulic transmission to 2 wet disc brakes on the differential half shafts of the rear axle with 6 lining discs each, 222 mm dia
Parking brake:	Wet disc brakes on the differential half shafts of the rear axle with 2 lining discs each, 222 mm dia, mechanically operated by pulling handle with ratchet
Steering brake:	Divided pedal of service brake, for normal use locked together
Trailer brake:	Optionally available

Wheels

Steered wheels:	At front, 2 cross-ply tyres 18.4 - 26 8 ply, GOODYEAR; max. permissible load per tyre 2265 kg at 1,4 bar inflation pressure and 30 km/h; track width 1846 mm or by turning the wheels 1952 mm; rims DW 16 x 26
Driving wheels:	At front and at rear; rear wheels: 2 radial-ply tyres 20.8 R 38 8 ply, CONTINENTAL; max. permissible load 3090 kg at 1,3 bar inflation pressure and 30 km/h; track width 1800 mm, adjustable up to 2200 mm in steps of 100 mm each; adjustable gauge bowl wheels and rims W18L x 38
Wheel base:	2826 mm

Cab

DEUTZ-FAHR
SK 1905-37/6
OECD-tested safety cab,
approval-no. CSD 0499/5;
antivibration mounted by 4 silent blocks on tractor; 1 door and 3 steps each on the left and right hand side;
steps 490, 750 and 995 mm, driver's platform 1270 mm above ground;
windscreen and rear window tiltable;
combined heating/ventilation system with 3-step blower and engine oil heat exchanger, incorporated in instruments console;
air intake above engine bonnet; air outlet jets at cab floor, at instrument panel and at windscreen;
heating by recirculating air is possible

noise reduction materials:

floor	foam PUR in PE-foil	25 mm
	rubber mat	5 mm
mudguards	imitation leather on moltoprene foam	8 mm
seat support	rubber mat	4 mm

roof	cotton fleece, phenolic resin bonded	2-6	mm
	needle fleece	2	mm
	foam	30	mm
	needle fleece	3	mm
instruments and steering support left and right inside	foam	30	mm
bottom inside	foam block	300x130x100	mm

rubber-metal in rod between accelerator pedal and injection pump

Seat

GRAMMER, DS 85H/90 AR
upholstered seat with adjustable back rest and arm rests, adjustable spring with shock absorber;
height of unloaded seat above driver's platform adjustable in 2 steps from 480 to 540 mm; longitudinal adjustment 150 mm;
seat revolving about vertical axle to either side about 25°

Number of grease points

18

Overall dimensions

Total length:	4777 mm without ballast 5040 mm with ballast
Total width:	2372 mm with and without ballast
Total height:	2870 mm to mouth of exhaust silencer 2770 mm to top of cab
Ground clearance:	420 mm below side fixation of lower links

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

Lighting equipment — Electrical, 12 Volt, as per German legislation

	Dimensions mm	Height above ground of centre mm	Distance from outside edge of tractor to centre mm
Head lights	130 dia	1285	982
Side lights	50 x 50	1785	415
Rear lights	40 x 60	1725	380
Reflectors	103 x 58	1420	177

Running-time meter — Mechanical, combined with tachometer, driven by camshaft of engine; reference engine speed for one real counted hour 1800 rev/min

Possible combinations of tyres

Tyre size	
at front	at rear
9.5 - 36 10 ply	11.2 - 48 8 ply 12.4 - 46 10 ply
14.9 - 28 6 ply 16.9 - 26 6 ply	18.4 - 38 8 ply
16.9 - 28 6 ply 18.4 - 26 8 ply	20.8 - 38 8 ply 23.1 - 34 8 ply

TEST CONDITIONS

Track setting: 1846 mm at front
1800 mm at rear

Weights

		Without driver	With driver
Without ballast:	front	2365 kg	2375 kg
	rear	3615 kg	3700 kg
	total	5980 kg	6075 kg
Front ballast:	14 weights, total		560 kg
	water in the tyres		635 kg
Rear ballast:	2 weights per wheel, total		190 kg
	water in the tyres		1050 kg
With ballast:	front	3600 kg	3610 kg
	rear	4815 kg	4900 kg
	total	8415 kg	8510 kg

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

Fuels and lubricants used in tests

Fuel:	ARAL Diesel-fuel DIN 51601	
	density at 15°C	
	at engine tests	0,835 kg/l
	at p.t.o. tests	0,836 kg/l
	at drawbar tests	0,838 kg/l
Engine oil:	DEUTZ HD SAE 15W/40	
Gear oil:	DEUTZ HD SAE 15W/40 in gearbox including rear axle	
	DEUTZ gear oil API-GL5 SAE 90 in front axle including final drives	
Hydraulic oil:	DEUTZ SG HD-B SAE 20W/20 in power lift and steering	
Grease:	Multi-purpose grease	
Remarks and repairs	None	

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE (1000 1/min)

Date of tests: 4th February 1985
Location of tests: DLG-Testing-Station Groß-Umstadt
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Speed engine 1/min	Speed p.t.o. 1/min	Fuel consumption hourly l/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
MAXIMUM POWER						
At 2-hour test						
109.0	2300	1098	32.04	26.79	246	3.40
At rated engine speed						
107.8	2400	1145	32.60	27.25	253	3.31
At standard p.t.o. speed						
106.6	2095	1000	30.26	25.30	237	3.52
Part loads, the governor hand lever in the position corresponding to the maximum power at full load (curve a)						
(i) the torque corresponding to maximum power at rated speed						
107.8	2400	1145	32.60	27.25	253	3.31
(ii) 85% of the torque obtained in (i)						
93.2	2439	1164	29.17	24.39	262	3.19
(iii) 75% of the torque defined in (ii)						
70.3	2455	1172	23.52	19.66	280	2.99
(iv) 50% of the torque defined in (ii)						
47.1	2468	1178	18.36	15.35	326	2.57
(v) 25% of the torque defined in (ii)						
23.7	2486	1187	13.05	10.91	460	1.82
(vi) unloaded						
-	2542	1213	7.81	6.53	-	-

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

Power kW	Speed engine 1/min	Speed p.t.o. 1/min	Fuel consumption hourly 1/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve b)						
(i) the torque corresponding to maximum power						
106.6	2095	1000	30.26	25.30	237	3.52
(ii) 85% of the torque obtained in (i)						
92.3	2132	1018	26.58	22.22	241	3.47
(iii) 75% of the torque defined in (ii)						
69.8	2152	1027	21.28	17.79	255	3.28
(iv) 50% of the torque defined in (ii)						
46.8	2163	1032	16.07	13.44	287	2.91
(v) 25% of the torque defined in (ii)						
23.6	2186	1043	11.13	9.31	394	2.12
(vi) unloaded						
-	2230	1065	6.11	5.11	-	-

Standard specific fuel consumption (g/kWh): 262/326/241/287

No load maximum engine speed: 2542 1/min
Equivalent flywheel torque at rated engine speed: 429 Nm
at max. power (2 hours) : 453 Nm
Maximum equivalent flywheel torque: 523 Nm at 1696 1/min of the engine

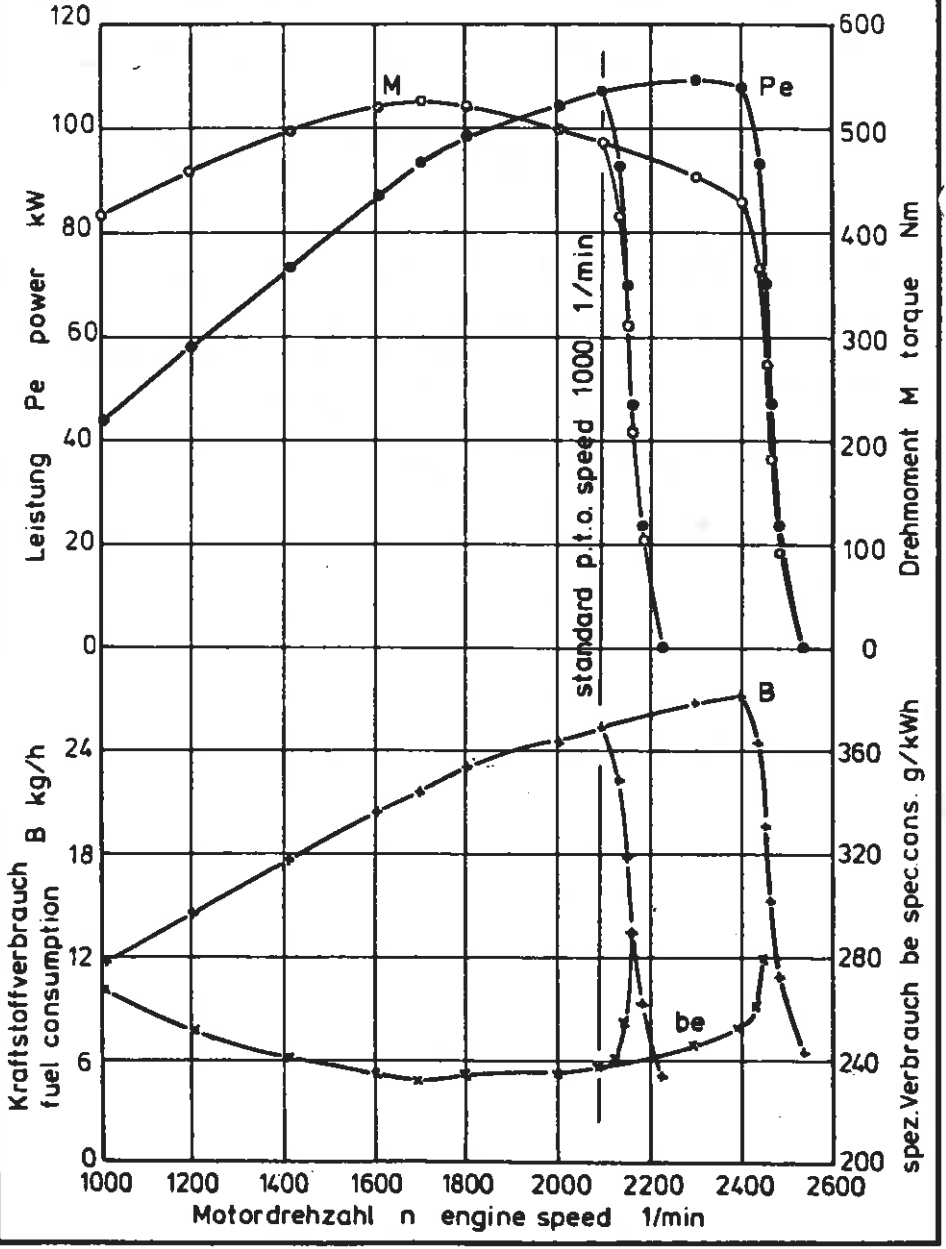
Mean atmospheric conditions:	temperature	19 °C
	pressure	996 mbar
	relative humidity	50 %
Maximum temperatures:	cylinder head	108 °C
	engine oil	110 °C
	fuel	18 °C
	engine air intake	23 °C

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test Nr. 85-10

Zapfwellenleistung

P.T.O. Performance

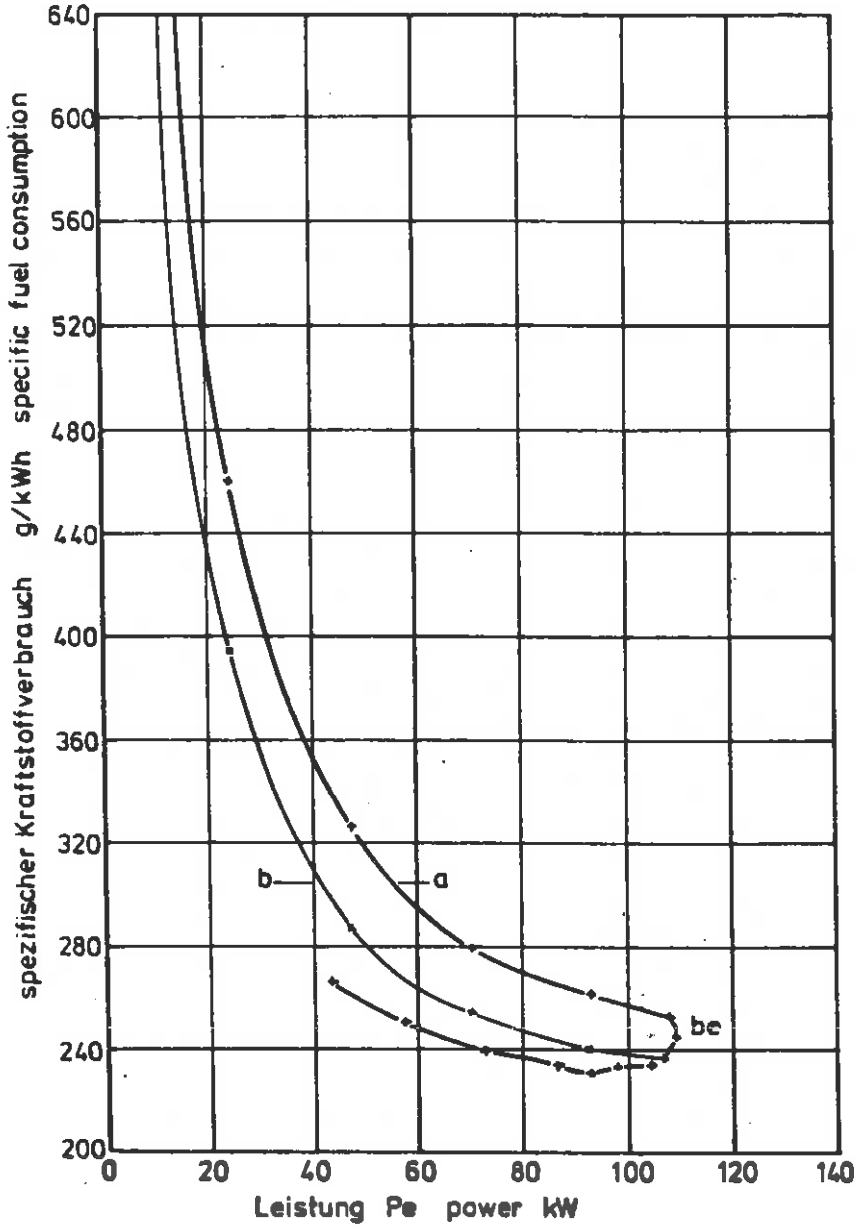


PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test Nr. 85-10

Zapfwellenleistung

P.T.O. Performance



PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

(2) DRAWBAR PERFORMANCE

Date of tests: 19th till 30th April 1985
Type of track: Concrete

Gear	Driving speed km/h	Power kW	Drawbar pull daN	Engine speed 1/min	Slip of wheels %
(i)	MAXIMUM POWER (unballasted) height of drawbar above ground 525 mm				
3 L Lo	4,20	72,8	6240	2457	14,9
1 M Hi	4,53	78,5	6241	2454	14,9
2 M Lo	5,14	87,1	6101	2400	13,5
3 L Hi	5,33	87,3	5899	2404	12,1
4 L Lo	6,12	88,2	5187	2401	9,0
2 M Hi	6,73	91,6	4898	2403	8,0
3 M Lo	7,50	90,5	4344	2402	6,7
4 L Hi	7,90	91,7	4179	2401	6,4
1 H Lo	8,55	90,3	3800	2404	5,6
3 M Hi	9,56	91,4	3441	2400	4,9
(ii)	MAXIMUM POWER (ballasted) height of drawbar above ground 515 mm				
1 L Lo	2,17	51,3	8509	2463	14,9
1 L Hi	2,71	64,1	8512	2456	15,0
2 L Lo	3,03	71,4	8485	2451	14,9
1 M Lo	3,51	82,8	8496	2396	14,9
2 L Hi	3,84	87,1	8163	2399	11,9
3 L Lo	4,36	89,0	7352	2399	9,1
1 M Hi	4,75	92,5	7007	2397	8,1
2 M Lo	5,42	91,7	6093	2402	6,5
3 L Hi	5,64	92,8	5926	2400	6,1
4 L Lo	6,33	91,4	5197	2402	4,8
2 M Hi	6,93	94,4	4906	2402	4,5
3 M Lo	7,64	91,9	4329	2397	3,9
4 L Hi	8,05	93,6	4184	2399	3,6
(iii)	FIVE-HOUR-TEST at 75% of pull at maximum power in 2 M Hi gear				
2 M Hi	7,21	73,7	3680	2463	3,1
(iv)	FIVE-HOUR-TEST at pull corresponding to 15 % wheel slip in test (ii)				
2 L Lo	3,00	70,9	8512	2450	-

Total oil consumption during ten hours duration of tests (iii) and (iv) 98 g/h

PRÜFUNGS-ABTEILUNG

Test No. 85-10

Tyre size front: 18.4 - 26 8 ply
rear: 20.8 R 38 8 ply

Tread bar height at the beginning of drawbar tests 95 % at front, 97 % at rear of the value, when new

Specific fuel consumpt. g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Cylinder-head °C	Engine oil °C	Atmospheric conditions Temperature °C	Relative humidity %	Pressure mbar
tyre inflation pressure 1,1 bar at front; 1,0 bar at rear							
341	2,46	24	75	90	13	82	1007
330	2,54	24	60	89	14	74	1007
312	2,69	27	62	89	10	77	1007
311	2,70	24	70	98	15	73	1007
308	2,72	24	73	94	15	73	1007
298	2,82	26	73	97	16	69	1007
301	2,79	26	75	95	15	68	1007
296	2,84	28	75	95	19	64	1007
301	2,78	27	78	96	18	64	1007
297	2,82	24	74	92	14	86	996
tyre inflation pressure 1,1 bar at front; 1,0 bar at rear							
370	2,27	30	63	90	10	54	999
341	2,46	34	60	90	10	55	999
343	2,44	30	66	90	10	59	1000
328	2,55	27	64	89	7	64	1000
311	2,70	32	72	92	10	55	999
304	2,75	23	74	93	11	56	999
296	2,83	23	70	92	11	57	999
297	2,83	23	72	93	12	56	999
292	2,87	24	78	92	12	54	999
298	2,81	25	75	94	12	55	999
288	2,91	25	74	95	12	52	999
296	2,83	25	76	91	15	58	998
290	2,89	25	70	92	15	58	998
310	2,70	19	60	88	9	80	995
-	-	20	65	91	6	74	995

Test (iv) was carried out with additional ballast, the figures not quoted are therefore irrelevant

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 18.4 - 26 8 ply
rear: 20.8 R 38 8 ply

Track of wheels front: 1846 mm
rear: 1800 mm

Front wheel drive disengaged

	With brakes left-hand m	With brakes right-hand m	Without brakes left-hand m	Without brakes right-hand m
Radius of turning space	6,72	6,39	7,88	7,48
Radius of turning circle	6,31	6,04	7,47	7,13

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	1017 mm
Distance forward from rear axle centre	1107 mm
Distance from tractor's median plane, to the left	13 mm

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

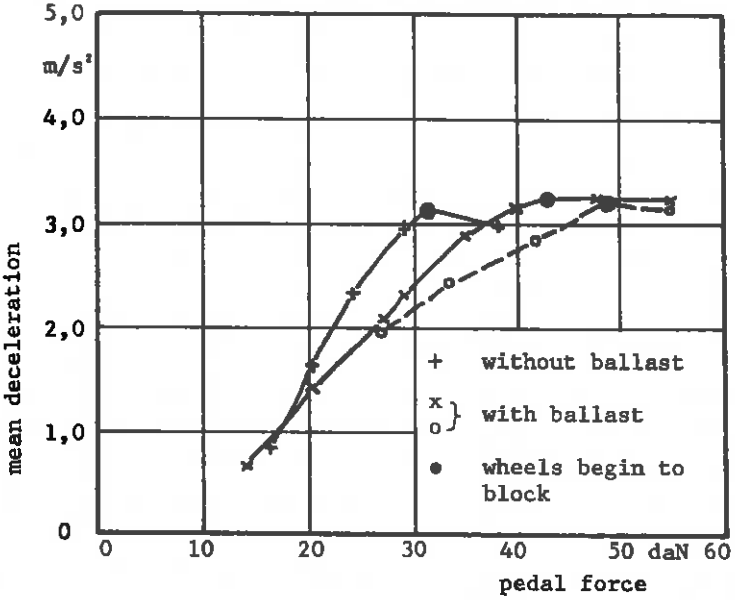
(5) Braking (Front wheel drive disengaged)

Date of tests:

	Tractor mass (with driver) front kg	rear kg	total kg	Speed before application of brakes km/h
Without ballast	2375	3700	6075	31,6
With ballast	3610	4900	8510	31,4

A) Service brake

Type-0-test(cold brakes) ——— , 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

B) Parking brake

	Ballasted tractor on 18%-slope		Unballasted tractor on 12%-slope with trailer of 3000 kg	
	up	down	up	down
Braking device control force daN	8	11	12	14

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10 Test No. 85-10

(6) MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 23rd April 1985
Type of track: Concrete
Type of sound level meter: BRÜEL & KJAER model 2209

Results of test

Gear: 4 H Hi +)
Travelling speed before acceleration: 23,7 km/h
Sound level: 88,0 dB(A)

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR

Date of tests: 22nd April 1985
Type of track: Concrete
Type of sound level meter: BRÜEL & KJAER model 2209

Tractor fitted with DEUTZ-FAHR safety cab SK 1905-37/6

Results of tests

Gear	Drawbar pull at which the tractor develops the maximum sound level	Travelling speed nominal	Travelling speed effective	Sound level
	daN	km/h	km/h	dB(A)
1 L Lo	5739	2,44	2,27	82
1 L Hi	5788	3,06	2,81	82,5
2 L Lo	5758	3,42	3,01	82,5
1 M Lo	5800	4,05	3,69	82,5
2 L Hi	5702	4,29	3,82	83
3 L Lo	5760	4,71	4,18	83,5
1 M Hi	5717	5,09	4,58	83,5
2 M Lo	5173	5,69	5,39	84
3 L Hi	5095	5,91	5,62	84
4 L Lo	4417	6,56	6,38	83
2 M Hi	4256	7,14	6,96	84
3 M Lo *)	4128	7,84	7,67	83
3 M Lo *)	light load	7,84	8,46	80
4 L Hi	3796	8,24	8,10	83,5
1 H Lo	3585	8,85	8,76	83,5
3 M Hi	3294	9,84	9,77	84
4 M Lo	2699	10,93	10,92	83,5
1 H Hi	2671	11,11	11,15	83
2 H Lo	2397	12,43	12,48	83,5
4 M Hi	2082	13,71	13,89	83,5
2 H Hi	1894	15,60	15,66	83,5
3 H Lo	1601	17,13	17,37	84
4 H Hi +)	light load	29,93	31,63	81,5

+) Front wheel drive disengaged
*) The 3 M Lo gear corresponds to the nominal travelling speed nearest to 7,5 km/h

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

(8) POWER LIFT AND HYDRAULIC POWER

Date of tests: 5th March and 11th April 1985

Power Lift

	Height of lower hitch point above ground in down pos. mm	Vertical movement mm	Max. force exerted through full range daN	Corresp. pressure of hydraul. fluid bar	Moment about rear axle daNm	Max. tilt angle of mast over range of lift degrees
At hitch points	200	640	5010	152	-	
On the frame	200	730	4480	152	7956	10,5

Temperature of hydraulic fluid at start of test 65 °C

Lifting heights relative to horizontal lower links

mm	-380	-345	-300	-200	-100	0	+100	+200	+295	+300	+350
Lifting forces at hitch points											
daN		5010	5090	5260	5440	5600	5730	5860	6060		
Lifting forces at test frame											
daN	4590		4630	4680	4680	4670	4630	4570		4520	4480

Hydraulic power test

Sustained pressure with relief valve open 178 bar

Pump delivery rate at minimum pressure and maximum engine speed 61,2 l/min

	Hydraulic power kW	Flow rate l/min	Pressure bar	Oil temperature °C
at 90 % of the actual relief valve setting	9,0	33,7	160	65
maximum	14,3	56,4	152	65

Tapping point used for test: at rear of tractor

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test No. 85-10

OPTIONAL TESTS

(9) ENGINE PERFORMANCE

Date of tests: 24th January 1985
Location of tests: DLG-Testing-Station Groß-Umstadt
Type of dynamometer: SCHENCK eddy-current dynamometer W 400

Power kW	Engine speed 1/min	Fuel consumption hourly 1/h	Fuel consumption hourly kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power					
At 2-hour test					
118.4	2400	33.34	27.50	232	3.55
At rated engine speed					
118.4	2400	33.34	27.50	232	3.55
At standard p.t.o. speed (1000 1/min)					
114.3	2095	30.61	25.25	221	3.73
Part loads					
(i) the torque corresponding to maximum power at rated speed					
118.4	2400	33.34	27.50	232	3.55
(ii) 85% of the torque obtained in (i)					
102.4	2441	29.71	24.51	239	3.45
(iii) 75% of the torque defined in (ii)					
77.4	2462	23.74	19.58	253	3.26
(iv) 50% of the torque defined in (ii)					
51.8	2473	17.69	14.59	282	2.93
(v) 25% of the torque defined in (ii)					
26.2	2499	11.53	9.51	363	2.27
(vi) unloaded					
-	2537	6.47	5.34	-	-

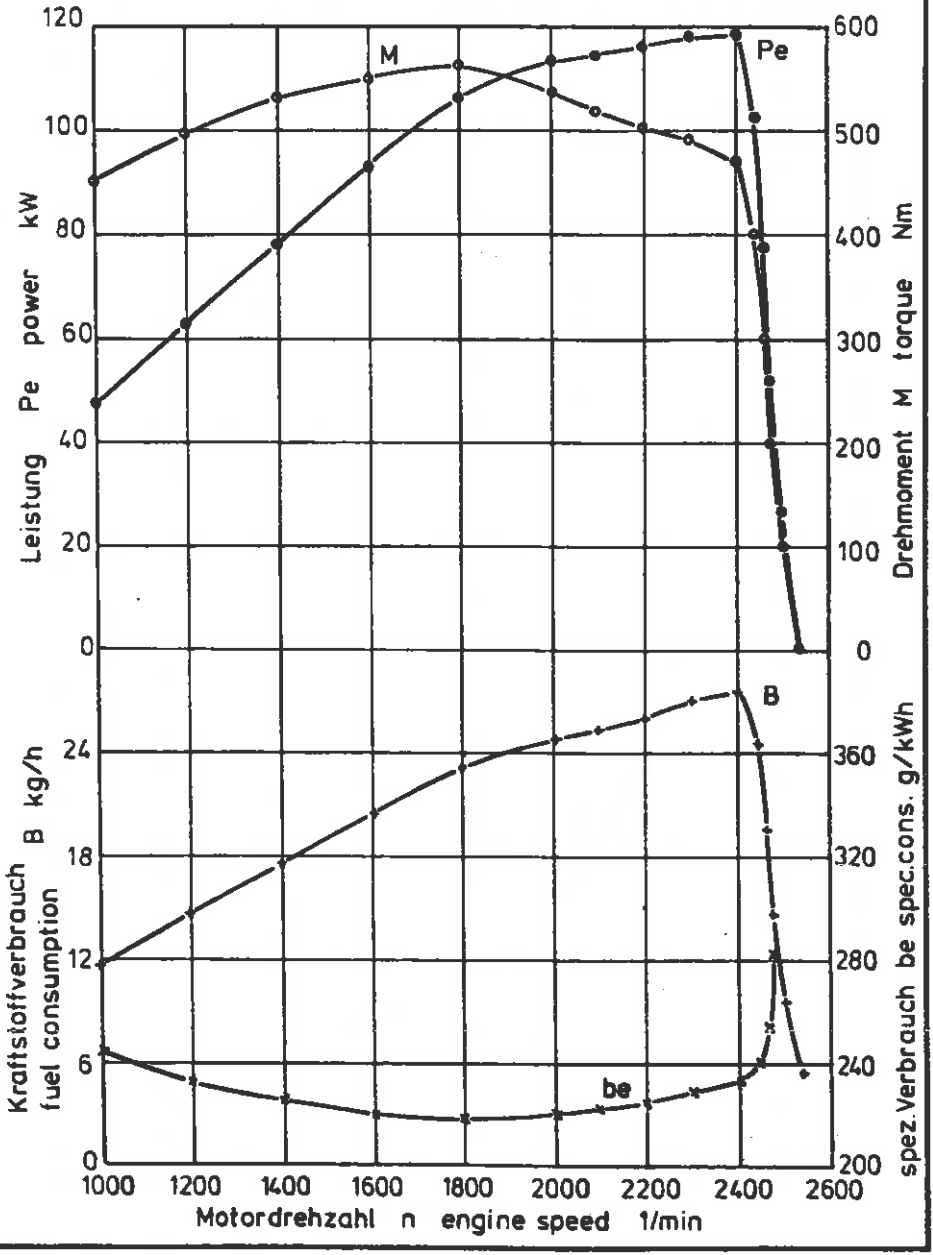
Optimum fuel consumption: 214 g/kWh at 82.9 kW and 1680 1/min
No load maximum engine speed: 2537 1/min
Torque at rated engine speed: 471 Nm
Maximum torque: 563 Nm at 1799 1/min of the engine

Mean atmospheric conditions:	temperature	18 °C
	pressure	988 mbar
	relative humidity	30 %
Maximum temperatures:	cylinder head	98 °C
	engine oil	93 °C
	fuel	17 °C
	engine air intake	21 °C

PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test Nr. 85-10

Motorleistung — Engine Performance

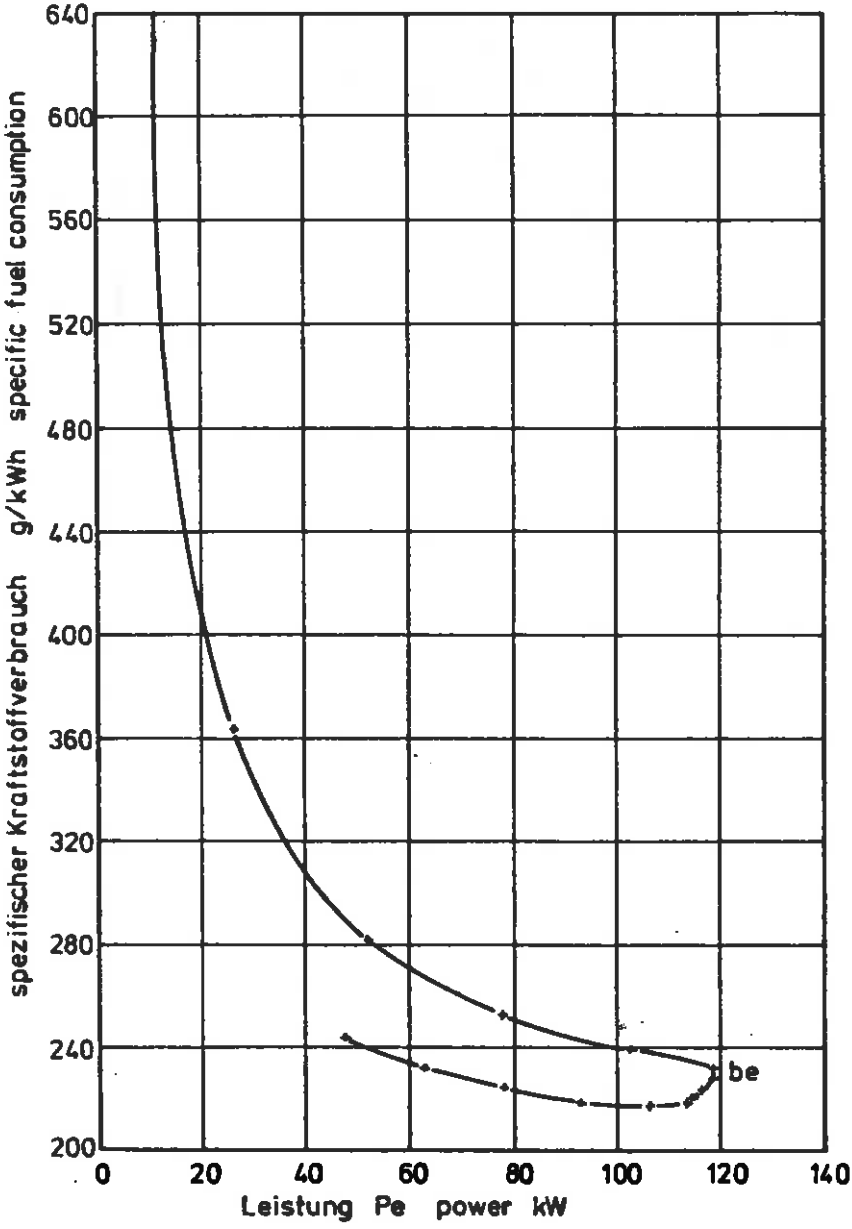


PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test Nr. 85-10

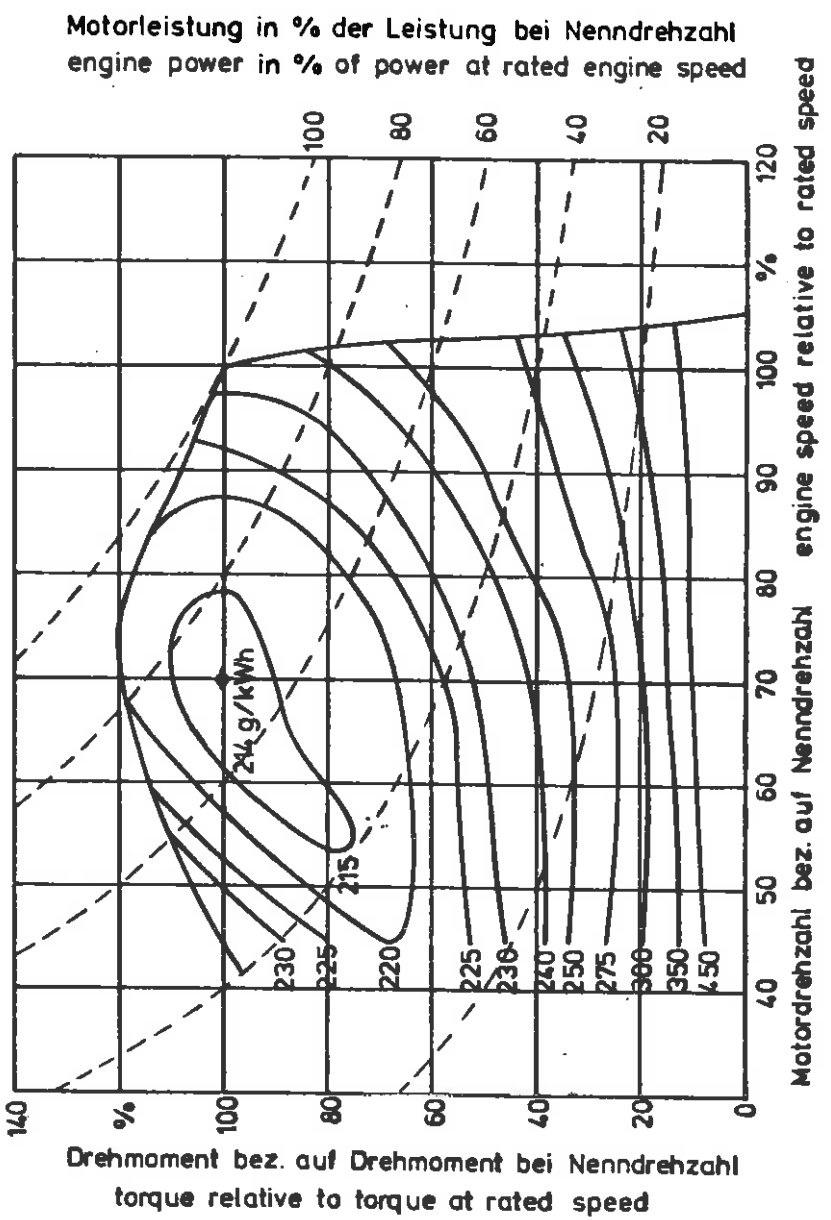
Motorleistung

Engine Performance



PRÜFUNGS-ABTEILUNG
DEUTZ-FAHR DX 7.10

Test Nr. 85-10



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

Deutsche Landwirtschafts-Gesellschaft e. V. (DLG)
Fachbereich Landtechnik — Prüfungsabteilung —
Zimmerweg 16 (DLG-Haus)
D-6000 Frankfurt am Main 1