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

O.E.C.D. No. 674



Agricultural Tractor EICHER 3555
trade name: EICHER 4072

Manufacturer
Gebr. Eicher, Traktoren- und Landmaschinenwerke GmbH
D-8380 Landau a. d. Isar

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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: February 1979 till January 1980

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.N.E.E.M.A., France) as being in accordance with the O.E.C.D STANDARD CODE.

Date of Approval: 6th March 1980 O.E.C.D. No. 674

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 = 750,1 mm Hg			

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PRÜFUNGS-ABTEILUNG
EICHER 3555

Test No.79 - 7

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Tractor manufacturer:	GEBR. EICHER GMBH D-8380 Landau
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement by DLG
Place of running-in:	Landau
Duration of running-in:	Engine 50 hours, tractor appr. 90 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	EICHER
Model:	3555 trade name 4072 wheel tractor, unit construction, rear-wheel driven
Serial no:	150389

Engine

Make:	PERKINS ENGINES S.A.
Model:	A 4.248
Type:	4-stroke Diesel-engine, direct injection, water-cooled
Serial no:	LF 22478 U 528 066 E
Cylinders:	4, in line, bore 101 mm, stroke 127 mm, displacement 4070 cm^3; compression ratio 16; replaceable dry cylinder liners
Valves:	Overhead
Fuel system:	AC DELCO fuel feed pump CAV distributor injection pump XS 60 E 800/8/238 manufacturer's production setting 60 mm^3/stroke at rated engine speed; injection timing 24° before TDC; CAV multihole injection nozzles BDLL 150 S, injection pressure 170 bar; CAV two-stage fuel filter with replaceable cartridges; capacity of fuel tank 110 l
Governor:	Mechanically acting centrifugal variable speed governor, incorporated in injection pump; governed range of engine speed 800 to 2300 rev/min, rated engine speed 2150 rev/min

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Air cleaner:	MANN PICLON dry paper element filter with precleaner, with replaceable cartridge and electrically operating maintenance indicator
Exhaust silencer:	LEISTRITZ single chamber reflexion-absorption-type silencer, 110 mm dia, 640 mm long, on the right hand side of engine cowling, mouth showing upward, mouth 2550 mm above ground
Lubrication system:	Forced feed from gear pump; strainer in sump; PERKINS oil filter in full flow with replaceable cartridge and by-pass valve; cartridge change at all oil changes; oil capacity 8,3 l; recommended oil quality MIL-L-2104 B; recommended oil viscosities: winter SAE 10W summer SAE 20W/20 tropics SAE 30 oil change interval 150 hours
Cooling system:	Pressurized water cooling system with pump; overpressure set to 0,6 bar; thermostat with by-pass; fan with 4 blades, 412 mm dia, cooling water capacity 14,2 l
Starting system:	Electrical LUCAS screw-push starter motor M50G-12V, 3 kW; CAV flame plug in intake pipe
Electrical equipment:	12 Volt BOSCH 3-phase alternator G 1 14V 28A, 1 lead-acid battery 110 Ah at 20 hours rating

Transmission

Clutch:	LAMELLEN- UND KUPPLUNGSBAU GMBH dry dual disc clutch DT 280/280 G; gearbox drive pedal operated, p.t.o. drive hand lever operated; both discs 280 mm dia
Gear box:	Own make speed change gear with 4 forward speeds and 1 reverse speed, reverse and 1st gear collar shifted, 2nd gear sliding gear shifted, 3rd und 4th gear synchronized; group gear with 2 groups L and H, L-group collar shifted, H-group sliding gear shifted; additional reduction gear with 2 groups RGL and RGH, collar shifted; totally 16 forward speeds and 4 reverse speeds
Rear axle and final drives:	MASSEY- FERGUSON S.A. bevel gear drive with crown wheel and pinion; bevel gear differential with lock, pedal operated, self disengaging; planetary final drives
Front axle:	Not propelled

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Oil capacity:	Gear box in common with rear axle drive and hydraulic system	47 l
	rear axle final drives each	2 l
Oil changing interval:	600 hours	
Recommended oil qualities:	Final drives: Transmission oil SAE 90 MIL - L - 2105 B	
	gear box: Compulsorily multi-purpose transmission oil SAE 20W/30 acc. to MF specif. M 1139	

Total ratios and speeds see page 8

Power take-off

Independent p.t.o.,
at rear of tractor,
driven through the second disc of the dual disc clutch;
height above ground 587 mm, in tractor's median plane,300 mm behind rear axle centre line;
2 interchangeable p.t.o.shafts for 540 rev/min and 1000 rev/min p.t.o. speeds;
by interchanging p.t.o.-stub-shafts correct speed ratio is selected:

540 rev/min p.t.o.
35 mm dia, 6 splines, DIN 9611
and ISO 500 type 1;
613 rev/min at rated engine speed,
standard p.t.o. speed 540 rev/min at
1893 rev/min engine speed

1000 rev/min p.t.o.
35 mm dia, 21 slines, DIN 9611
and ISO 500 type 2;
1132 rev/min at rated engine speed,
standard p.t.o. speed 1000 rev/min at
1900 rev/min engine speed

p.t.o. speeds may be set by aid of tractor-meter;
direction of rotation clockwise,
viewed from tractor rear

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Total ratios and speeds (tyres 18,4 R 30)

Group	Reduction gear	Gear	Total ratio engine : driving wheels	Nominal travelling speed *) at rated engine speed km/h
Forward speeds				
L	RGL	1	615,21	0,95
		2	410,14	1,42
		3	300,28	1,94
		4	223,71	2,61
	RGH	1	264,34	2,21
		2	176,22	3,31
		3	129,02	4,52
		4	96,12	6,07
H	RGL	1	150,38	3,88
		2	100,26	5,82
		3	73,40	7,95
		4	54,69	10,67
	RGH	1	64,62	9,03
		2	43,08	13,55
		3	31,54	18,50
		4	23,50	24,84
Reverse speeds				
L	RGL	R	410,14	1,42
	RGH	R	176,22	3,31
H	RGL	R	100,26	5,82
	RGH	R	43,08	13,55

*) calculated with the RADIUS INDEX 720 mm as per WdK 154

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Power lift

Hydraulic system:

MASSEY-FERGUSON S.A.
hydraulic power lift in unit construction;
MF piston pump with 29 l/min delivery
at rated engine speed,
in gear box, driven by the disc of the p.t.o. clutch*);
MF control valve for lifting, lowering, draft control, position control and floating position;
top link sensing;
maximum oil pressure 210 bar;
1 single acting main cylinder with 85,6 mm bore and 120,7 mm stroke,
without overpressure relief valve;
1 external additional MF cylinder with
25 mm bore and 302 mm stroke

MF gear-type pump for auxiliary hydraulic system,
36 l/min delivery at rated engine speed,
in gear box, driven by the disc of the p.t.o. clutch *);
up to 3 single or double acting additional control valves with oil tappings available

Oil capacity 47 l in common with gear box;
max. 13 l may be taken off through oil tappings when tractor is travelling, 15 l when tractor is working stationary

Implement linkage:

Three point linkage category II DIN 9674,
WALTERSCHEID quick coupler;
2 holes in the lower links for fitting the lift rods:
hole 1 in 560 mm
hole 2 in 610 mm distance of pivot point of lower links;
lift rods adjustable from 660 to 740 mm;
lifting range above ground when using hole no. 1:
with short lift rods from 308 to 885 mm
with long lift rods from 80 to 708 mm

hole no. 2:
with short lift rods from 405 to 895 mm
with long lift rods from 196 to 760 mm

*) both pumps stall during manipulation of the p.t.o. clutch hand lever

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Holed bar:	Short bar, fitted on clevis of lower links; length between the joint balls 830 mm, width 80 mm, thickness 30 mm; centre hole and 4 holes in 80 mm distance each on either side; all holes 33 mm diameter; height above ground adjustable by power lift in the range from 95 to 910 mm, depending on lift rods length and fixing on the lower links, measured at the surface of the bar; distance of holes centre line with lower links in horizontal position: from rear axle centre 998 mm from p.t.o. shaft end 698 mm

Pull attachment

Swinging drawbar	Height above ground 330 or 415 mm, adjustable by turning drawbar; hitch hole 33 mm diameter; distance of hitch hole centre from rear axle centre 700 mm from p.t.o. shaft end 400 mm pivot point 145 mm behind rear axle centre; drawbar lateral swingable about 280 mm to either side
Trailer hitch:	CRAMER height above ground adjustable by shifting and turning in 4 steps from 775 to 970 mm; hitch hole 33 mm diameter; distance of hitch hole centre to rear axle centre 550 mm; permissible vertical load 1000 kg
Towing hitch:	675 mm above ground

Steering

ZAHNRADFABRIK FRIEDRICHSHAFEN AG
hydrostatic steering model 8450 with
own oil circuit;
PLESSEY gear type pump with 6 cm^3/rev
delivery,
directly driven by engine;
oil capacity 5 l,
transmission oil ATF type A;
oil changing once a year;
1 double acting ram with 57 mm bore
and 150 mm stroke
acting directly on front axle

Brakes

Parking brake: Mechanically acting on the discs of the service brake;
operated by hand lever with ratchet

Service brake: GIRLING
hydraulically acting wet disc brake with
5 lining discs on each differential
half shaft,
disc diameter 222 mm,
pedal operated

Steering brake: 2 additional hand levers on the left hand side of driver's seat, acting on the parking brake

Wheels

Steered wheels: 2 pneumatics in front 7,50-20 6 ply
maximum permissible load per tyre 875 kg
at 2,25 bar inflation pressure and 30 km/h;
track width adjustable to 1580 or 1715 mm
by turning wheels;
rims 5.50 F x 20

Driving wheels:	2 pneumatics at rear 18,4 R 3o 6 ply radial type tyre casing; maximum permissible load per tyre 2120 kg at 1,1 bar inflation pressure and 3o km/h; track widths adjustable from 1530 to 2230 mm in steps of 100 mm each by turning wheels and offset lug type rims; rims W 14L x 30
Wheel base:	2410 mm
Cab	Own make safety cab, OECD-tested, approval no. CSD 0129/4; antivibration mounts; all windows tiltable; inside of cab covered with noise damping materials; doors on both sides of the cab; each entry with 2 steps; hot water heating and ventilation system
Seat	GRAMMER DS 2o 4 H upholstered seat with back rest; adjustable spring with shock absorber; height of driver's platform above ground 1010 mm; height of unloaded seat above platform adjustable in 3 steps from 420 to 480 mm; for and aft adjustable about 150 mm

Number of grease points 21

Track setting during tests

front axle	1580 mm
rear axle	1530 mm

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Dimensions

Total Length:	3960 mm	without ballast
	4280 mm	with ballast
Total width:	2015 mm	without ballast
	2180 mm	with ballast
Total height:	2550 mm	to mouth of exhaust silencer
Ground clearance:	340 mm	below swinging drawbar

Weights

Ready for use as tested, with cab

		without driver	with driver
Without ballast:	front	1300 kg	1315 kg
	rear	2320 kg	2380 kg
	total	3620 kg	3695 kg
Front ballast	1 front weight		37 kg
	8 front weights	28 kg each	224 kg
Rear ballast:	1 weight per wheel	180 kg each	360 kg
	water in the tyres		659 kg
With ballast	front	1620 kg	1635 kg
	rear	3280 kg	3340 kg
	total	4900 kg	4975 kg

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Lighting equipment Electrical 12 Volt
as per German legislation

	Dimensions mm	Height above ground to centre mm	Distance from outside edge of tractor to centre mm
Head lights	145 x 90	970	842
Side lights	70 x 20	1605	190
Rear lights	30 x 65	1450	250
Reflectors			
1st pair	130 x 40	1210	250
2nd pair	6o Ø	675	455

Permissible total weights and axle loads for all available wheel equipment

Wheel equipment front	Wheel equipment rear	Permissible total weight kg	Permissible axle load front kg	Permissible axle load rear kg
6,50-20 6 ply 7,50-20 6 ply	14,9-3o 6 ply	5200	1650 2000	3550
6,50-20 6 ply 7,5o-20 6 ply	16,9-30 6 ply	52oo	1650 2000	4000
6,50-2o 6 ply 7,50-20 6 ply	18,4-30 6 ply	5200	1650 2000	4000
6,50-20 6 ply 7,50-20 6 ply	16,9-34 6 ply	5200	1650 2000	4000
6,50-20 6 ply 7,50-20 6 ply	12,4-36 6 ply	4730	1650 2000	3080
6,50-20 6 ply 7,50-20 6 ply	13,6-36 6 ply	5100	1650 2000	3450
6,50-20 6 ply 7,5o-20 6 ply	13,6-38 6 ply	5200	1650 2000	3550

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FUELS AND LUBRICANTS USED IN TESTS

Fuel:	ARAL Diesel-fuel DIN 51601	
	specific gravity at 15° C:	
	at engine tests	0,829 kg/l
	at p.t.o. tests	0,831 kg/l
	at drawbar tests	0,826 kg/l
Engine:	ESSO ESSOLUBE HDX	SAE 20W/20
Transmission, rear axle and hydraulic:	ESSO multi purpose oil	20W/30
Final drives:	ESSO transmission oil	SAE 90
Steering:	OEST ATF oil type A	

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COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE (540 rev/min)

Date of tests: 12th June 1979
Type of dynamometer: SCHENCK hydraulic dynamometer U1-40

Power kW	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption total kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power						
At 2-hour test						
49.2	2150	613	15.58	12.95	263	3.16
At standard p.t.o. speed						
46.7	1893	540	14.19	11.80	253	3.29
At the speed recommended for drawbar work						
49.2	2150	613	15.58	12.95	263	3.16
Part loads, the governor hand lever in the position corresponding to the maximum power at full load						
(i) 85% of the torque at maximum power at 2-hour test						
42.9	2208	630	13.73	11.41	266	3.13
(ii) unloaded						
-	2290	653	4.17	3.46	-	-
(iii) 50% of the load defined in (i)						
21.9	2250	642	8.56	7.12	326	2.55
(iv) maximum power						
49.2	2150	613	15.58	12.95	263	3.16
(v) 25% of the load defined in (i)						
11.0	2266	646	6.32	5.25	476	1.74
(vi) 75% of the load defined in (i)						
32.4	2225	635	10.93	9.08	280	2.97

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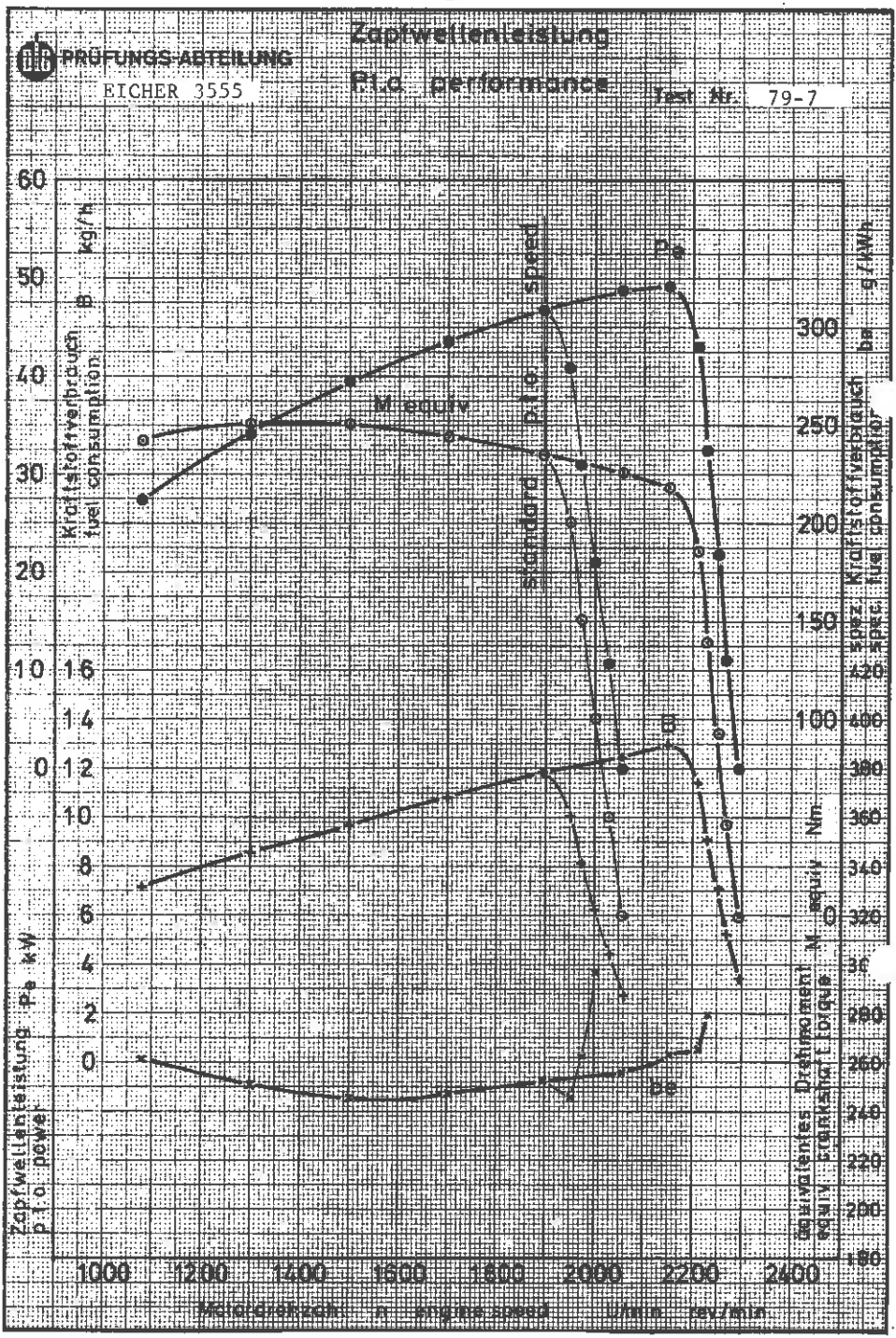
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Power kW	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption total kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load						
(i) 85% of the torque at maximum power at standard p.t.o. speed						
40.8	1946	555	12.07	10.03	246	3.38
(ii) unloaded						
-	2055	586	3.33	2.77	-	-
(iii) 50% of the load defined in (i)						
21.0	1998	570	7.48	6.22	297	2.80
(iv) maximum power						
46.7	1893	540	14.19	11.80	253	3.29
(v) 25% of the load defined in (i)						
10.6	2027	578	5.32	4.42	416	2.00
(vi) 75% of the load defined in (i)						
31.0	1969	562	9.80	8.14	263	3.16

Standard specific fuel consumption (g/kWh): 266/326/246/297

No load maximum engine speed: 2290 rev/min
Equivalent crankshaft torque at maximum power (2 hours): 218 Nm
Maximum equivalent crankshaft torque: 251 Nm at 1499 rev/min of the engine

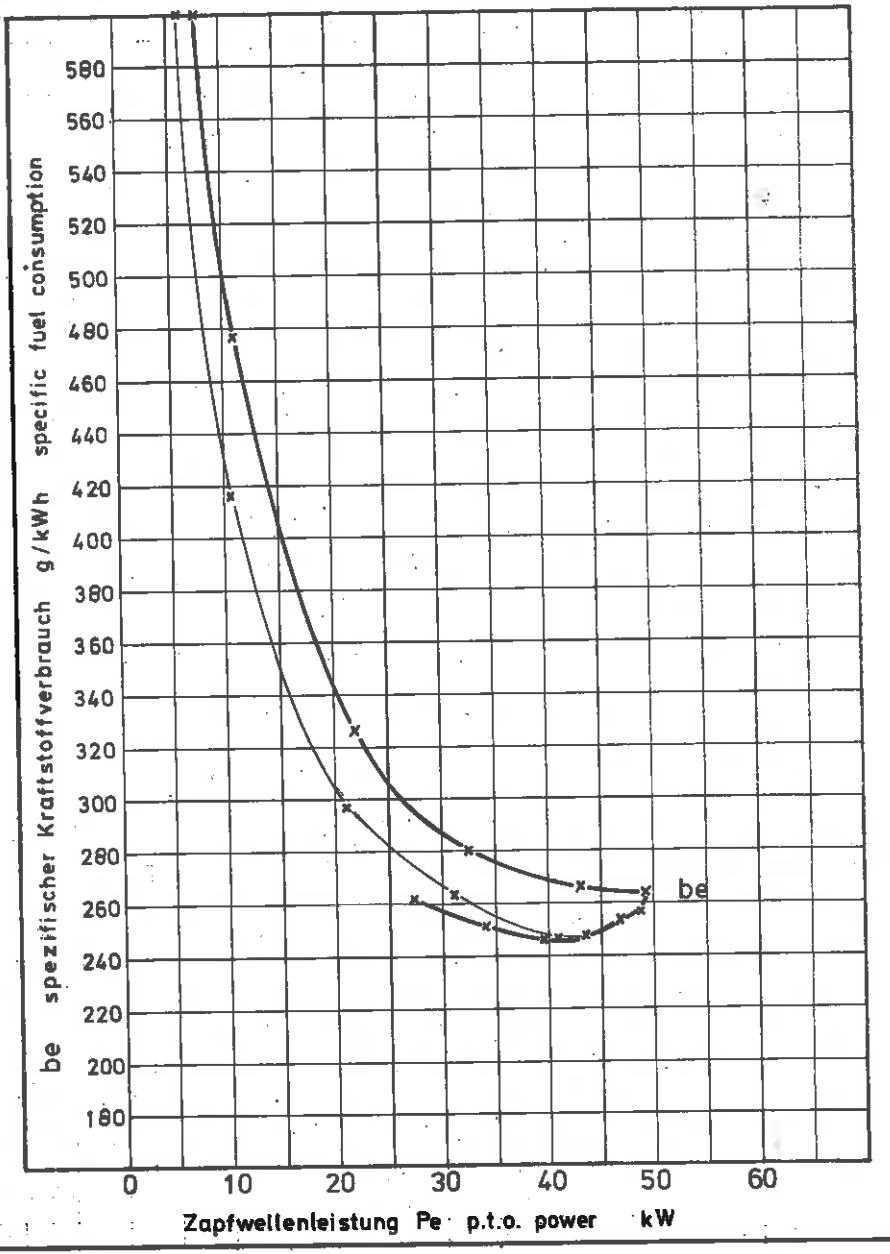
Mean atmospheric conditions:	temperature	24 °C
	pressure	1002 mbar
	relative humidity	80 %
Maximum temperatures:	coolant	88 °C
	engine oil	107 °C
	fuel	25 °C
	engine air intake	24 °C


PRÜFUNGS-ABTEILUNG
FICHER 3555
Zapfwellenleistung
P.t.o. performance
Test Nr. 79-7
Zapfwellenleistung Pe kW
p.t.o. power
Kraftstoffverbrauch g kg/h
fuel consumption
Standard p.t.o. speed
M equiv
Pe
B
be
spez. Kraftstoffverbrauch be g/kWh
spec. fuel consumption
äquivalentes Drehmoment M equiv Nm
equiv. constant t. torque
Motordrehzahl n engine speed U/min rev/min

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Zapfwellenleistung
P.t.o. performance

Test Nr. 79-7



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(2) DRAWBAR PERFORMANCE

Date of tests: 14th till 17th January 1980
Type of track: Concrete

Gear No. and Group	Driving speed km/h	Power kW	Drawbar pull daN	Engine speed rev/min	Slip of wheels %
(i) MAXIMUM POWER with ballast height of drawbar above ground 625 mm					
1 L RGL	0,84	11,3	4852	2259	14,9
2 L RGL	1,25	16,8	4845	2242	15,0
3 L RGL	1,70	22,8	4844	2231	15,0
1 L RGH	1,92	26,0	4873	2220	15,0
4 L RGL	2,24	30,2	4848	2204	15,0
2 L RGH	2,80	37,7	4849	2179	15,1
1 H RGL	3,43	41,6	4368	2148	10,0
3 L RGH	4,12	43,4	3794	2150	7,3
2 H RGL	5,42	43,7	2903	2147	5,0
4 L RGH	5,66	43,7	2782	2150	4,8
3 H RGL	7,52	43,4	2080	2151	3,4
1 H RGH	8,57	44,3	1861	2152	3,0
4 H RGL	10,19	42,3	1493	2150	2,3
2 H RGH	13,02	42,6	1179	2149	1,7
(ii) FIVE-HOUR-TEST at 75 % of pull at maximum power in 3rd H RGL gear					
3 H RGL	7,83	33,9	1560	2216	2,4
(iii) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (i)					
2 L RGH	2,85	38,6	4873	2184	-
(iv) MAXIMUM POWER without ballast height of drawbar above ground 660 mm					
1 H RGL	3,33	34,2	3698	2198	15,0
3 L RGH	3,84	39,5	3707	2165	15,0
2 H RGL	5,24	42,9	2950	2147	8,9
4 L RGH	5,50	43,2	2830	2147	8,4
3 H RGL	7,42	42,6	2065	2152	5,6
1 H RGH	8,45	44,0	1876	2149	5,0
4 H RGL	10,10	42,4	1512	2150	3,9
2 H RGH	12,90	43,2	1205	2148	3,0

Total oil consumption during ten hours duration of tests (ii) and (iii) 92 g/h

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Tyres size front: 7,50 - 20 6 ply
rear :18,4 R 30 6 ply

Tread bar height at the beginning of drawbar tests 82 % of the value when new

Specific energy kWh/l	Specific fuel consumpt. g/kWh	Fuel °C	Temperatures Coolant °C	Engine-oil °C	Atmospheric conditions Tempe-rature °C	Relative humidity %	Pressure mbar
tyre inflation pressure 1,1 bar							
1,57	528	7	82	75	0	80	1006
1,93	431	8	83	76	0	79	999
2,21	374	11	84	77	0	74	999
2,37	348	15	84	77	0	51	999
2,39	346	12	84	78	0	69	999
2,56	325	7	85	79	0	79	999
2,67	311	6	85	82	0	71	1000
2,79	298	6	86	80	0	79	1000
2,80	298	6	86	80	0	78	1000
2,82	295	5	86	80	0	79	1000
2,78	300	5	85	80	0	73	1000
2,84	293	5	85	81	0	76	1000
2,69	309	5	85	81	0	78	1000
2,73	305	5	85	80	1	72	1000
2,76	302	5	88	85	1	77	998
-	-	4	89	87	2	80	997
tyre inflation pressure 1,1 bar							
2,51	332	4	83	79	-3	76	1005
2,58	323	3	84	80	-3	78	1005
2,74	304	3	84	80	-3	74	1005
2,76	303	3	84	80	-3	75	1005
2,72	307	4	85	81	-2	69	1004
2,84	294	4	84	79	-2	71	1004
2,72	307	4	84	81	-2	69	1002
2,76	302	4	84	81	-2	70	1002

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

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(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 7,50 - 20 6 ply
rear: 18,4 R 30 6 ply

Track of wheels front: 1580 mm
rear: 1530 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	3,74	3,82	4,17	4,29
Radius of turning circle	3,91	3,98	4,34	4,45

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	970 mm
Distance forward from rear axle centre	858 mm
Distance from tractor's median plane, to the left	7 mm

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(5) BRAKING PERFORMANCE

A) SERVICE BRAKE

Date of tests: 15th and 16th January 1980
Type of track: Concrete
Type of decelerometer: MOTO-METER-Bremsverzögerungs- und Pedalkraftschreiber

Weight of ballasted tractor with driver 4975 kg

Cold brakes

		With ballast	Without ballast
Travelling speed	km/h	25,0	25,0
Deceleration	m/s^2	4,2	4,1
Stopping distance	m	7,0	7,0
Force on pedal	daN	31	29
Force on pedal to achieve a deceleration of 2,5 m/s^2	daN	18	14

Brake fade characteristics (hot tests)

Deceleration	hot/cold	%	100	100
Stopping distance	cold/hot	%	103	100
Force on pedal	cold/hot	%	107	130

B) PARKING BRAKE

Tractor facing up 16% slope
Pull on hand brake 14 daN, tractor does not roll

Tractor facing down 16% slope
Pull on hand brake 14 daN, tractor does not roll

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(6) AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 15th January 1980
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Results of test

Gear: 4th H RGH
Travelling speed before acceleration: 19,3 km/h
Sound level: 90,0 dB(A)

(7) NOISE AT THE DRIVER'S EAR LEVEL

Date of tests: 14th January 1980
Type of track: Concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

The tractor was fitted with EICHER safety cab

Results of tests

Gear	Drawbar pull at which the tractor develops the maximum sound level daN	Travelling speed nominal km/h	Travelling speed effective km/h	Sound level dB(A)
1 L RGL	3681	0,95	0,84	89,5
2 L RGL	3672	1,42	1,25	89,0
3 L RGL	3704	1,94	1,69	88,5
1 L RGH	3687	2,21	1,92	89,0
4 L RGL	3693	2,61	2,21	88,5
2 L RGH	3707	3,31	2,80	88,5
1 H RGL	3698	3,88	3,31	89,5
3 L RGH	3668	4,52	3,83	90,0
2 H RGL	2916	5,82	5,29	91,5
4 L RGH	2805	6,07	5,52	91,5
3 H RGL *)	2071	7,95	7,40	90,5
1 H RGH	1866	9,03	8,46	91,0
4 H RGL	1508	10,67	10,09	91,5
2 H RGH	1199	13,55	12,91	90,5
3 H RGH	824	18,50	17,77	91,5
4 H RGH	light load	24,84	25,70	91,0

*) The 3rd H RGL gear corresponds to the travelling speed nearest to 7,5 km/h.

(8) HYDRAULIC PUMP PERFORMANCE AND POWER LIFT

Date of tests: 25th May and 12th August 1979

HYDRAULIC PUMP

Power lift circuit

(1) Opening pressure of relief valve in power lift circuit	181 bar
Sustained pressure by open relief valve	216 bar
(2) Pump delivery rate at minimum pressure and rated engine speed	29,4 l/min
(3) Pump delivery rate at max. hydraulic power	28,2 l/min
corresponding delivery pressure	181 bar
power	8,5 kW

Auxiliary hydraulic circuit

(1) Opening pressure of relief valve in remote circuit	160 bar
Sustained pressure by open relief valve	184 bar
(2) Pump delivery rate at minimum pressure and rated engine speed	36,4 l/min
(3) Pump delivery rate at max. hydraulic power	36,0 l/min
corresponding delivery pressure	167 bar
power	10,0 kW

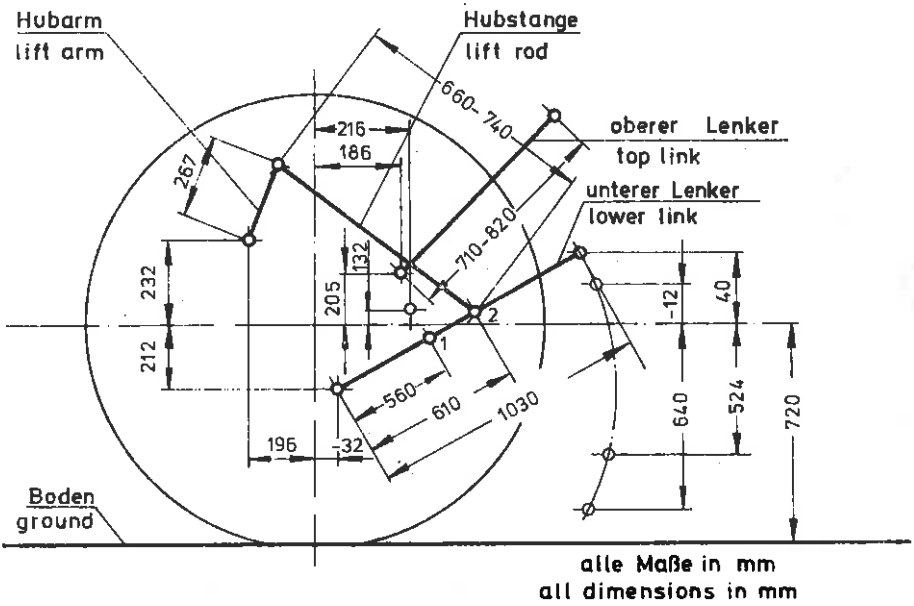
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POWER LIFT

Dimensions of linkage geometry for the table on page 27



LINKAGE GEOMETRY when connected to the standard frame	Maximum mechanical advantage	Minimum mechanical advantage
Projected length in side view:		
Lower links	1030 mm	1030 mm
Lift arms	267 mm	267 mm
Lift rods	740 mm	740 mm
Top link	813 mm	780 mm
Distance of lift rod connection point from pivot point of lower link	610 mm	560 mm
The following dimensions are given relative to rear axle centre line 720 mm above ground		
Lower link pivot point	32 mm forward, 212 mm below	32 mm forward, 212 mm below
Top link pivot point	186 mm behind, 205 mm above	216 mm behind, 132 mm above
Lift arm pivot point	196 mm forward, 232 mm above	196 mm forward, 232 mm above
Maximum and minimum height of lower link hitch points	40 mm above, 524 mm below	12 mm below, 640 mm below
Height of lower link hitch points above ground when locked in highest transport position	760 mm	708 mm

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LIFTING FORCES

Lifting heights relative to horizontal lower links

mm	-461	-428	-400	-325	-300	-200	-103

at hitch points maximum mechanical advantage

daN							3150

minimum mechanical advantage

daN		2120	2170		2290	2330	

Max. force exerted throughout the whole range 2600 daN

Front of tractor does not lift, if front axle is ballasted to its max. permissible load (2000 kg)

at test frame maximum mechanical advantage

daN				2510	2510	2460	

minimum mechanical advantage

daN	2020		2000		1980	1950	

max. force exerted throughout the whole range 2000 daN

Force at which front of tractor lifts if front axle is ballasted to its maximum permissible load (2000 kg) 294o daN

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-100	0	+100	+200	+242	+247	+300	+387

lift rods 660 mm long, hole no. 2

3130	3010	2890	2780			2700	2600

lift rods 740 mm long, hole no. 1

2310	2270	2250	2190				

lift rods 740 mm long, hole no.2, upper top link pivot point

2380	2300	2210	2080		2000		

lift rods 740 mm long, hole no.1, lower top link pivot point

1890	1830	1760	1690	1640			

All values of forces for pressure 181 bar at max. hydraulic power, see page 25; calculated from measurements at max. oil pressure 216 bar

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OPTIONAL TESTS

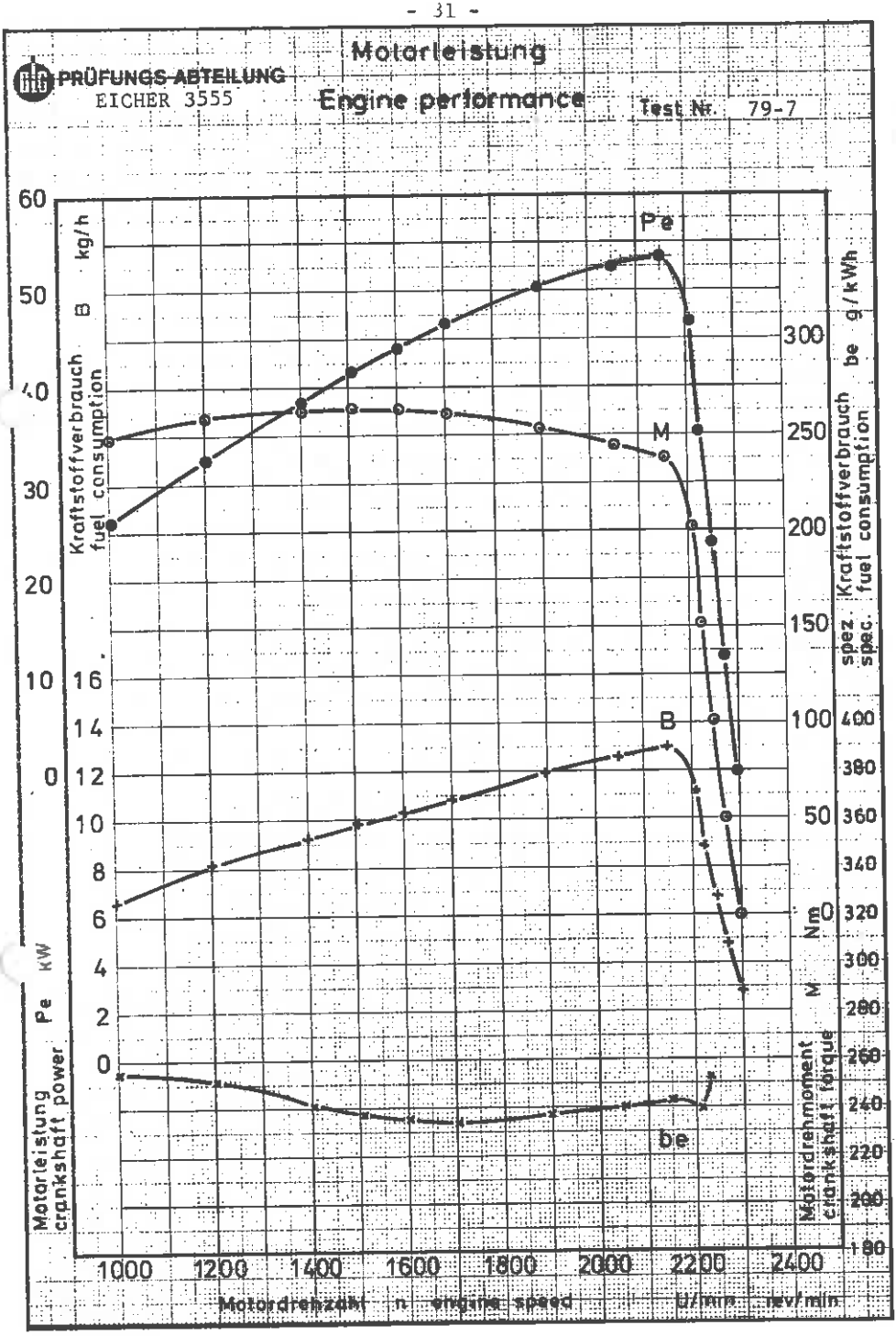
(9) ENGINE PERFORMANCE

Date of tests: 14th and 15th February 1979
Type of dynamometer: SCHENCK eddy-current dynamometer W 150

Power kW	Engine speed rev/min	Fuel consumption total l/h	Fuel consumption total kg/h	Fuel consumption specific g/kWh	Specific energy kWh/l
Maximum power					
At 2-hour test					
53.6	2150	15.70	13.02	243	3.41
At standard p.t.o. speed (540 rev/min)					
50.3	1893	14.36	11.90	236	3.51
At the speed recommended for drawbar work					
53.6	2150	15.70	13.02	243	3.41
Part loads					
(i) 85% of the torque at maximum power at 2-hour test					
46.8	2207	13.49	11.18	239	3.47
(ii) unloaded					
-	2297	3.52	2.91	-	-
(iii) 50% of the load defined in (i)					
23.8	2247	8.20	6.80	286	2.90
(iv) maximum power					
53.6	2150	15.70	13.02	243	3.41
(v) 25% of the load defined in (i)					
12.0	2270	5.85	4.85	403	2.06
(vi) 75% of the load defined in (i)					
35.3	2223	10.75	8.91	252	3.29

Optimum fuel consumption: 224 g/kWh at 29,0 kW and 1399 rev/min
No load maximum engine speed: 2297 rev/min
Torque at maximum power (2 hours): 238 Nm
Maximum torque: 264 Nm at 1505 rev/min of the engine

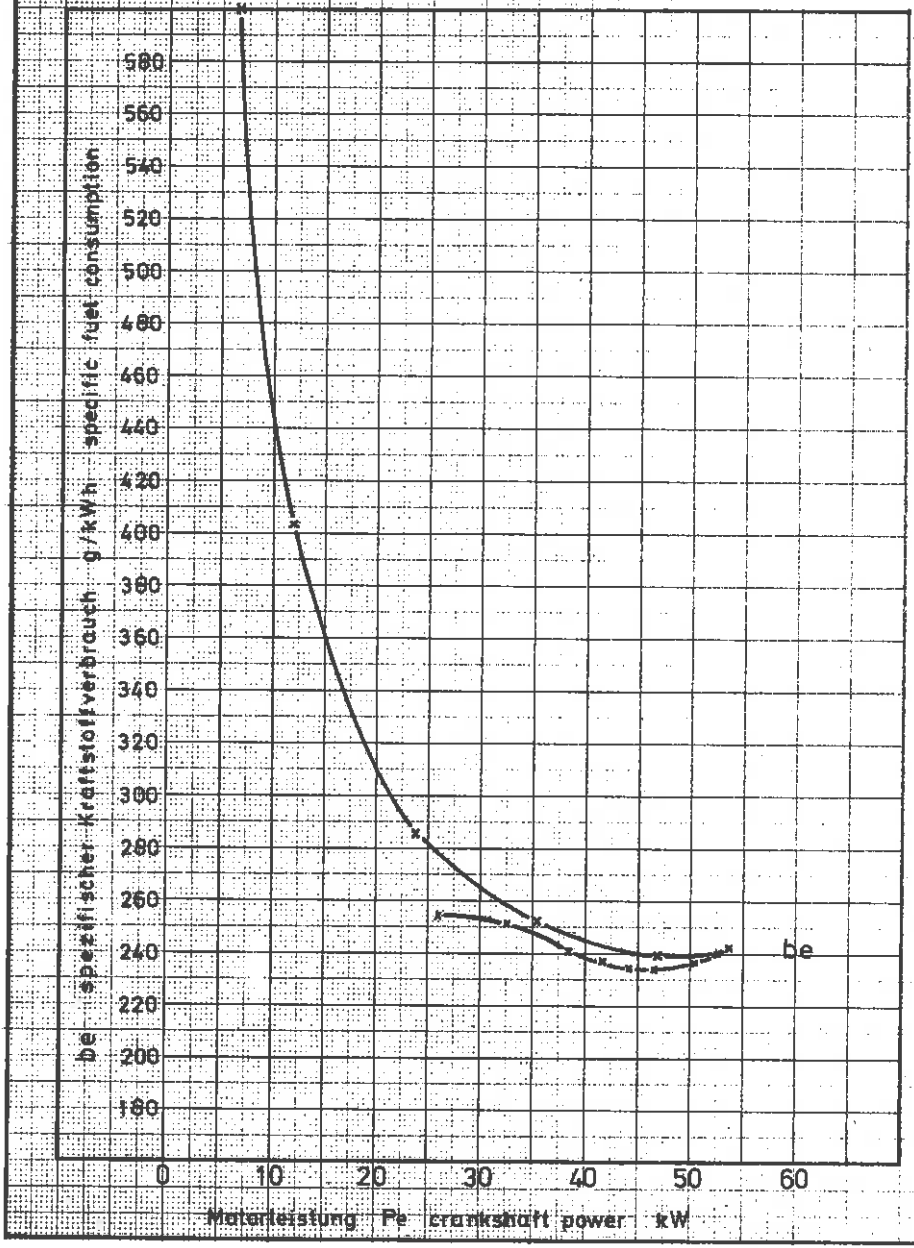
Mean atmospheric conditions:	temperature	20 °C
	pressure	969 mbar
	relative humidity	50 %
Maximum temperatures:	coolant	86 °C
	engine oil	111 °C
	fuel	21 °C
	engine air intake	20 °C

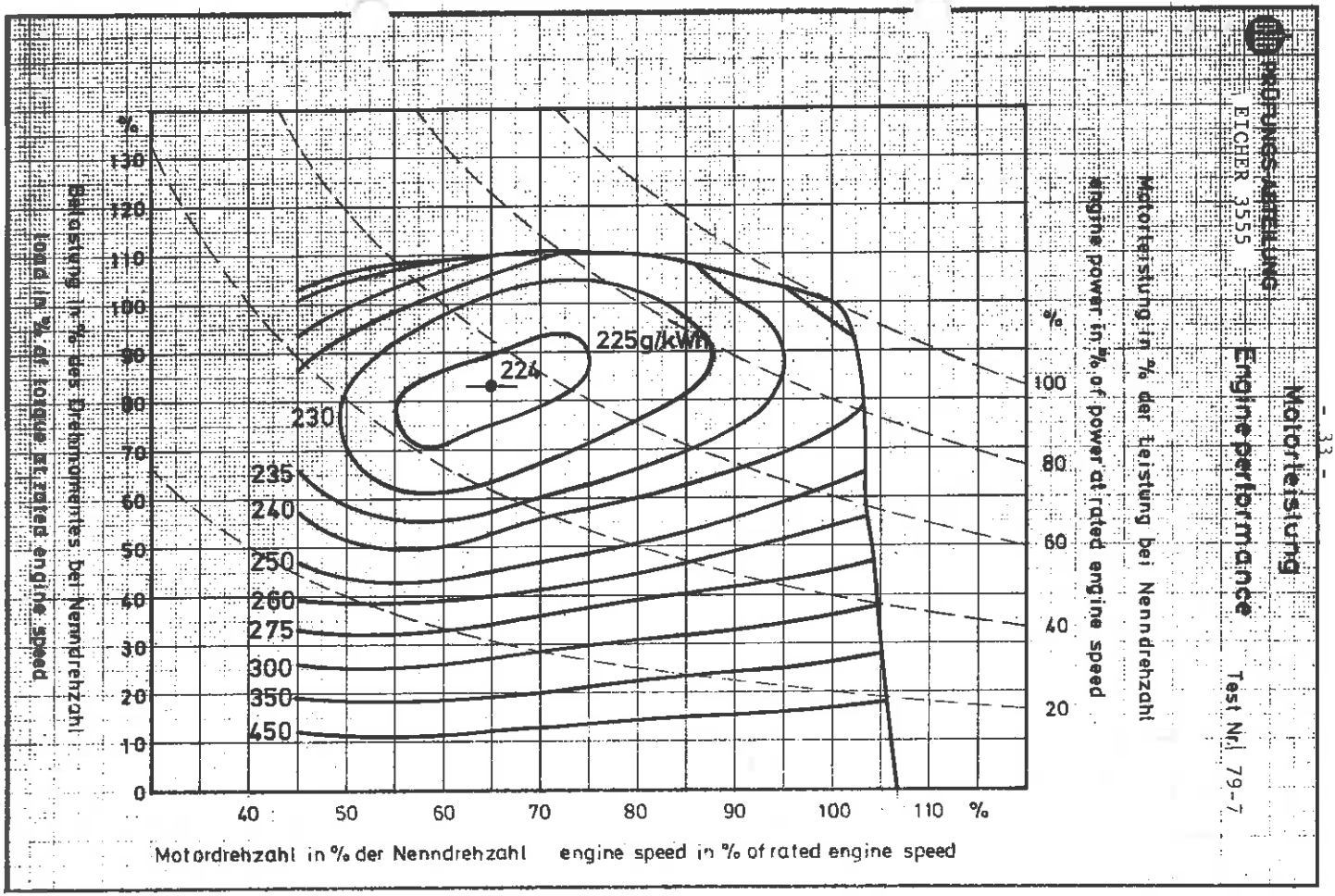

PRÜFUNGS-ABTEILUNG
EICHER 3555
Motorleistung
Engine performance
Test Nr. 79-7
Pe
M
B
be
Kraftstoffverbrauch B kg/h
fuel consumption
Kraftstoffverbrauch be g/kWh
spez. fuel consumption spec.
Motorleistung Pe kW
crankshaft power
Motordrehmoment M Nm
crankshaft torque
Motordrehzahl n engine speed U/min rev/min
1000
1200
1400
1600
1800
2000
2200
2400

PRÜFUNGS ABTEILUNG
EICHER 3555

Motorleistung
Engine performance

Test Nr. 79-7




Motorleistung
Engine performance
Test Nr. 79-7
MOTOREN-WERKE
EICHER 3555
Motorleistung in % der Leistung bei Nenndrehzahl
engine power in % of power at rated engine speed
Belastung in % des Drehmomentes bei Nenndrehzahl
load in % of torque at rated engine speed
225g/kWh
224
230
235
240
250
260
275
300
350
450
%
100
80
60
40
20
0
10
20
30
40
50
60
70
80
90
100
110
120
130
40
50
60
70
80
90
100
110 %
Motordrehzahl in % der Nenndrehzahl
engine speed in % of rated engine speed

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