O.E.C.D. Report No.: 351

BUNDESVERSUCHS - UND PRÜFUNGSANSTALT
für landwirtschaftliche Maschinen und Geräte,
Wieselburg

Steyr - Diesel - Tractor Typ 1090

Manufactured by: Steyr - Daimler - Puch AG.
Steyr, Austria



Serial No: 351
Date of Approval: 20th July 1971

Test No: 031/70
Date of Test: 26. 6. 1970

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. Test Code

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 in practical farm work.

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Tractor manufacturer:	STEYR-DAIMLER-PUCH AG., A-4400 Steyr
Submitted for test by:	Manufacturer
Selected by:	Bundesversuchs- und Prüfungsanstalt für landwirtschaftliche Maschinen und Geräte, Wieselburg a.d. Erlauf
Place of running-in:	STEYR-DAIMLER-PUCH AG., Steyr
Duration of running-in:	35 hours

SPECIFICATION OF TRACTOR

Tractor

Make:	STEYR-DAIMLER-PUCH AG., Steyr
Model:	1090 (hitherto 90)
Type:	Wheel tractor
Serial No.:	395-1109

Engine

Make:	STEYR-DAIMLER-PUCH AG., Steyr
Model:	STEYR WD 610 t
Type:	Direct injection type Diesel, 4-stroke
Serial No.:	610t - 1112
Cylinders:	6 cylinders, vertical in line, bore/stroke: 105-115 mm, capacity: 5976 cm^3; compression ratio: 17:1; arrangement of valves: overhead; cast-in cylinders
Fuel system:	Type of fuel feed: by wing unit pump in the Bosch distributor injection pump; fuel filter: strainer in the tank, Bosch duble filter with water trap 50 13400; capacity of fuel tank: appr. 118 l; injection pump: Bosch distributer BOSCH EP/VA6/110H 1100 BR 150; manufacturer's production setting: injection timing 18^0 - 1^0 before TDC; injection nozzle: BOSCH DLLA 150S 456; manufacturer's setting: injection pressure 220 ± 5 kp/cm^2; quantity of fuel feed: 46 - 2 mm^3/stroke at 2200 rev/min
Governor:	Make: BOSCH; Type: hydraulic Range of speed: 500 to 2400 rev/min Rated engine speed: 2200 rev/min

Air cleaner:	Make: IFE 808-8000 B 68; centrifugal pre-cleaner; type: oil bath air cleaner; oil capacity: appr. 1,8 l
Lubrication system:	Forced feed from gear type pump; type of filter: oil filter in full flow; oil capacity: appr. 14 l; oil change period: 200 h recommended oil in summer: HD SAE 30 in winter: HD SAE 20
Cooling system:	Type: water circulation by water pump, sealed cooling system with frost protected longtime filling (-20°C); thermostat; control-eye for coolant control; coolant capacity: appr. 22 l; indicating instrument for temperature control
Starting system:	BOSCH type 0 001 359 001, 12V, 4PS starter motor; aids for cold starting: glow filament in the intake manifold

Electrical system:

Voltage:	12 V
Generator:	BOSCH type 0 101 302 035; 14V; 16A; 224W; direct current
Battery:	ELBAK acid battery 0589; 2 x 12 V; each 98 Ah; DIN 72311

Transmission:

Clutch:	Make: FICHTEL & SACHS; single plate dry type clutch type G 350; 350 mm dia; foot pedal operated; and with load switchable multiple disk clutch for free engine p.t.o.
Gearbox:	Make: ZF - T 330 II; type: group gearbox, 1st and 2nd speed bolt-shifted, locking synchromesh gear for all other speeds; 12 forward speeds, 6 reverse
Rear axle and final drive:	Make: ZP; Type: central axle, bevel gear drive with hypoid-tooth system, acting by planetary gear on rear wheels; differential lock: lockable bevel differential gear in the rear axle
Oil capacity:	Gearbox and rear axle: 40 l; planetary gear: appr. 6 l for each half-axle; change period: 1200 hours

Group	Gear No.	Number of engine revolutions for one revolution of driving wheel	Nominal travelling speed for 2200 rev/min rated speed of engine
Normal group	1.	256,88	2,45 km/h
	2.	163,89	3,85 km/h
	3.	105,67	5,96 km/h
	4.	68,54	9,20 km/h
	5.	42,98	14,67 km/h
	6.	27,17	23,20 km/h
Inter-mediate group	1.	331,83	1,90 km/h
	2.	211,71	2,98 km/h
	3.	136,51	4,62 km/h
	4.	88,54	7,12 km/h
	5.	55,52	11,35 km/h
	6.	35,10	17,96 km/h
Inter-mediate reverse group	1.	258,80	2,44 km/h
	2.	165,12	3,82 km/h
	3.	106,46	5,92 km/h
	4.	69,05	9,13 km/h
	5.	43,30	14,56 km/h
	6.	27,37	23,03 km/h

*) Calculated with the static tyre rolling radius of 760 mm

Main power take-off:

Type:	Engine p.t.o. with multi disk clutch
Location:	At rear of tractor, in median plane, 636 mm above ground
Dimensions:	29 x 34,9 x 8,7 = $1\frac{3}{8}$", DIN 9611 Form A; 6 splines
Speed:	1st speed 673 rev/min at rated engine speed 2200 rev/min 2nd speed 1126 rev/min at rated engine speed 2200 rev/min 1765 rev/min at standard p.t.o. speed 540 rev/min; may be set by aid of tractormeter
Direction of rotation:	Clockwise viewed from driving end

Belt pulley:

Location:	At rear of tractor; driving device attached to p.t.o.; manually engaged
Dimension:	280 mm dia, 220 mm width
Speed:	1st speed: linear 766 m/min and 872 rev/min at engine speed 2200 rev/min 2nd speed: linear 1281 m/min and 1457 rev/min at engine speed 2200 rev/min

Engine speed:	1st speed: 2030 rev/min at standard linear speed 708 m/min (11,8 m/s) 2nd speed: 2182 rev/min at standard linear speed 1272 m/min (21,2 m/s)
Direction of rotation:	Anticlockwise viewed from driving end
Power lift:	Make: STEYR-DAIMLER-PUCH AG.; control unit BOSCH HY/SR 10H 2/1 175/4; type: oil hydraulic system (connection for external tappings); oil capacity: 16 l SHELL TELLUS 23 SAE 10W; category II; double stage control for tractive resistance; position control and floating position
Pull attachments:	
Drawbar:	Fixed on three point implement linkage; height above ground: max. 1030 mm, min. 375 mm; method of changing position: adjustable by power lift; distance from rear axle: 1030 mm (lower links in horizontal position); distance from p.t.o. in horizontal position: 720 mm; perforation: 7 holes with 115 mm distance, 32 mm dia
Trailer hitch:	Height above ground: 451/483 and 794/826 mm by changing trailer hitch case; distance from rear axle: 517 and 580 mm; distance from p.t.o. in horizontal position: 195 and 255 mm
Towing hitch:	Height above ground: 625 mm; distance from front axle: 525 mm
Steering:	Make: ZF, Schwäbisch Gmünd; system: column hydrosteering with hydraulic pump BOSCH HY/ZFR 1/8 AR 101 and one's own oil cycle; delivery: 16 l/min; operated by hand wheel; oil capacity: appr. 1,5 l SHELL DONAX T6
Brakes:	Make: ZP, Passau
Foot brake:	Type: internal shoe brake; hydraulically acting on rear wheels, operated by foot pedal
Parking brake:	Type: internal shoe brake; mechanically acting on rear wheels, operated by hand lever
Steering brake:	Operated by the single parts of the divided foot brake pedal; at normal use both parts are connected by a bolt
Wheels:	
Steering wheels:	Two at front; type of tyres: tractor front wheel tyres; size: 7,50-20 AS Front; ply rating: 6; maximum permissible weight on each tyre: 850 kp at 2,5 kp/cm^2 pressure;*) track width: 1500 mm; method of changing: at changed wheels 1750 mm

*) May be overstepped up to 25 % according to tyre manufacturer specification

Driving wheels: Two at rear; type of tyres: tractor driving wheel tyres; size: 18,4/15-34 AS; ply rating: 6; maximum permissible weight on each tyre: 2560 kp at 1,4 kp/cm^2 pressure; track width: 1644 mm; method of changing: at changed wheels 1900 mm

Wheel base: 2534 mm

Weights:

Tractor (without driver but with tanks full)

	Front kg	Rear kg	Total kg
Without ballast	1270	2160	3430
With ballast	1943	3412	5355

Ballast

	No. of weights	Total weight kg	Water kg
Front	15 with frame	673	-
Rear	10	532	720

Seat: Make: O. KLEPP, Wien; model: ELASTOMAT 600, serial No. 0004
Type of suspension: parallelogram suspension with helical coil compression springs;
Type of damping: hydraulic shock absorber;
Range of adjustment: the spring of the seat is adjustable by a spindle;
Axial adjustment: 80 mm

Number of grease points: (Whole tractor): 18

Overall dimensions:

	Length m	Width m	Height m
With ballast	4,64	2,185	2,16
Without ballast	4,19	2,096	2,16

Overall width at changed wheels 2,352 m (without ballast)

Lighting:

	Height above ground of centre cm	Diameter cm	Distance from outside edge of tractor to centre cm
Head lights	89,5	14 x 7,5	90
Side lights	159	7,5 x 3,5	12
Rear lights	151	10 x 5,5	9
Reflectors	159	7,5 x 3,5	9

FUEL AND LUBRICANTS USED IN TESTS

Laboratory and track tests:

Fuel: ELAN Diesel fuel, specific gravity at 15°C: 0,840 kp/l, Cetane No. 46,8 (quality corresponds with DIN 51601)

Engine oil: SHELL ROTELLA T Multigrade

Transmission oil: SHELL SPIRAX 90 E.P.

Hydraulic oil: SHELL TELLUS 23 (SAE 10 W)

COMPULSORY TESTS

(1) MAIN-POWER-TAKE-OFF PERFORMANCE

Date and location of tests: 2nd March 1970, Wieselburg

Type of dynamometer: Siemens-Schuckert pendulum generator G 273/15

Horsepower (metric)	Speed		Fuel consumption		
	engine	p.t.o.	total	specific	
hp	rev/min	rev/min	l/h	g/hph	hph/l
MAXIMUM POWER - 2 hours test					
83,5	2200	673	18,87	190	4,425
STANDARD p.t.o. SPEED (540/1000 rev/min)					
78,9	1765	540	17,22	183	4,580
THE SPEED RECOMMENDED BY THE MANUFACTURER FOR DRAWBAR WORK					
83,5	2200	673	18,87	190	4,425
PART LOADS					
(i) 85% of torque at maximum power					
76,1	2325	711	17,95	198	4,24
(ii) unloaded					
0	2440	746	5,24	-	-
(iii) 50% of the load defined in (i)					
46,0	2385	730	12,75	233	3,61
(iv) maximum power					
84,4	2190	670	19,0	189	4,44
(v) 25% of the load defined in (i)					
23,0	2410	737	9,31	340	2,47
(vi) 75% of the load defined in (i)					
67,3	2340	716	16,32	205	4,125

No load maximum engine speed: 2440 rev/min

Torque*) at maximum power: 27,6 kpm

Maximum torque*): 34,2 kpm at 1205 rev/min of the engine

Means atmospheric conditions — temperature: 22°C (aspiration temp.20

pressure: 729 mm Hg

relative humidity: 40 %

Maximum temperature — coolant: 98°C

engine oil: 102°C

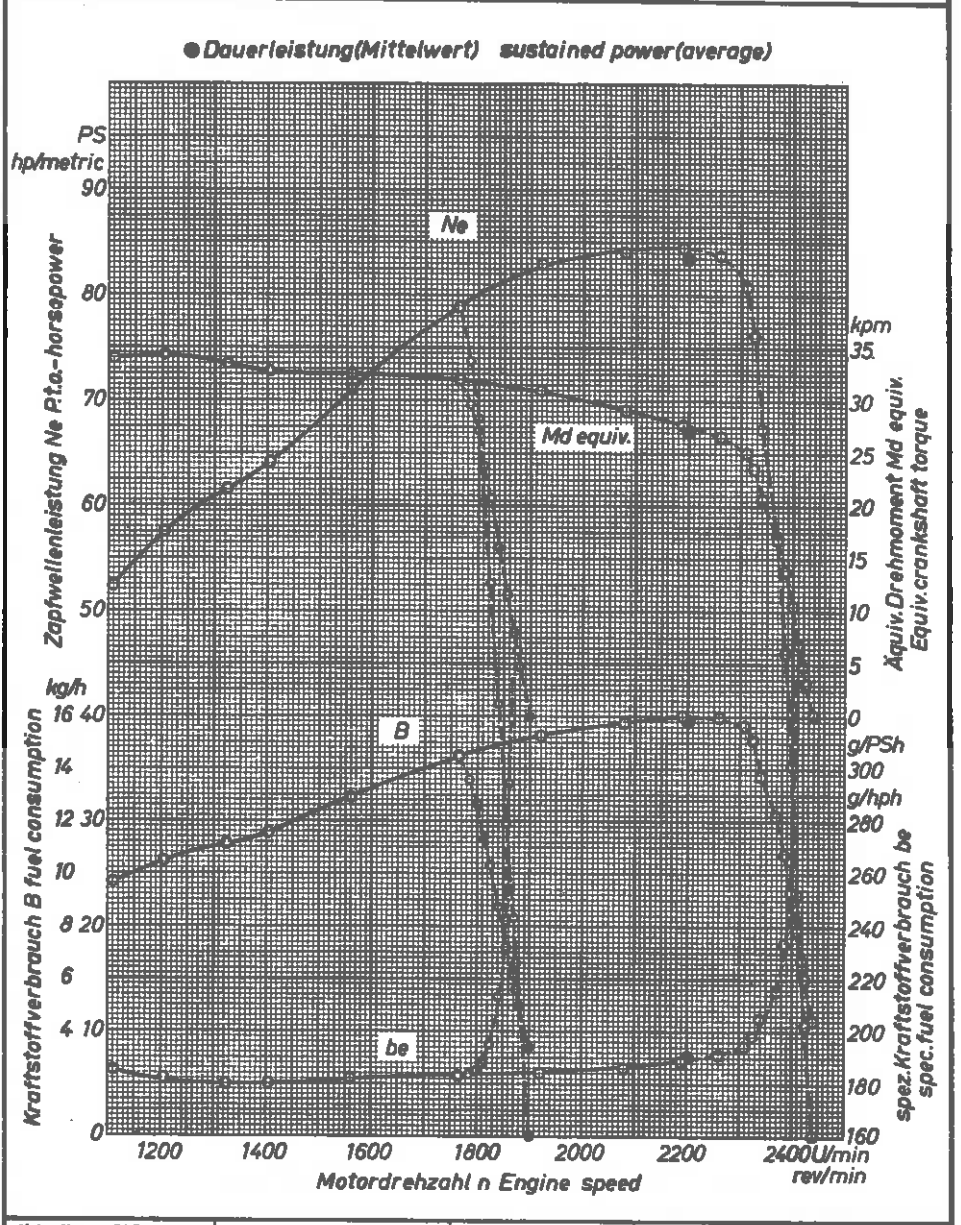
fuel: 60°C

*) The torque reported is the equivalent crankshaft torque

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PROTOKOLL NR. 031/70

Zapfwellenprüfung
P.t.o. - test

Steyr-Dieseltraktor
Typ 90
Mot. Typ Steyr WD 610t

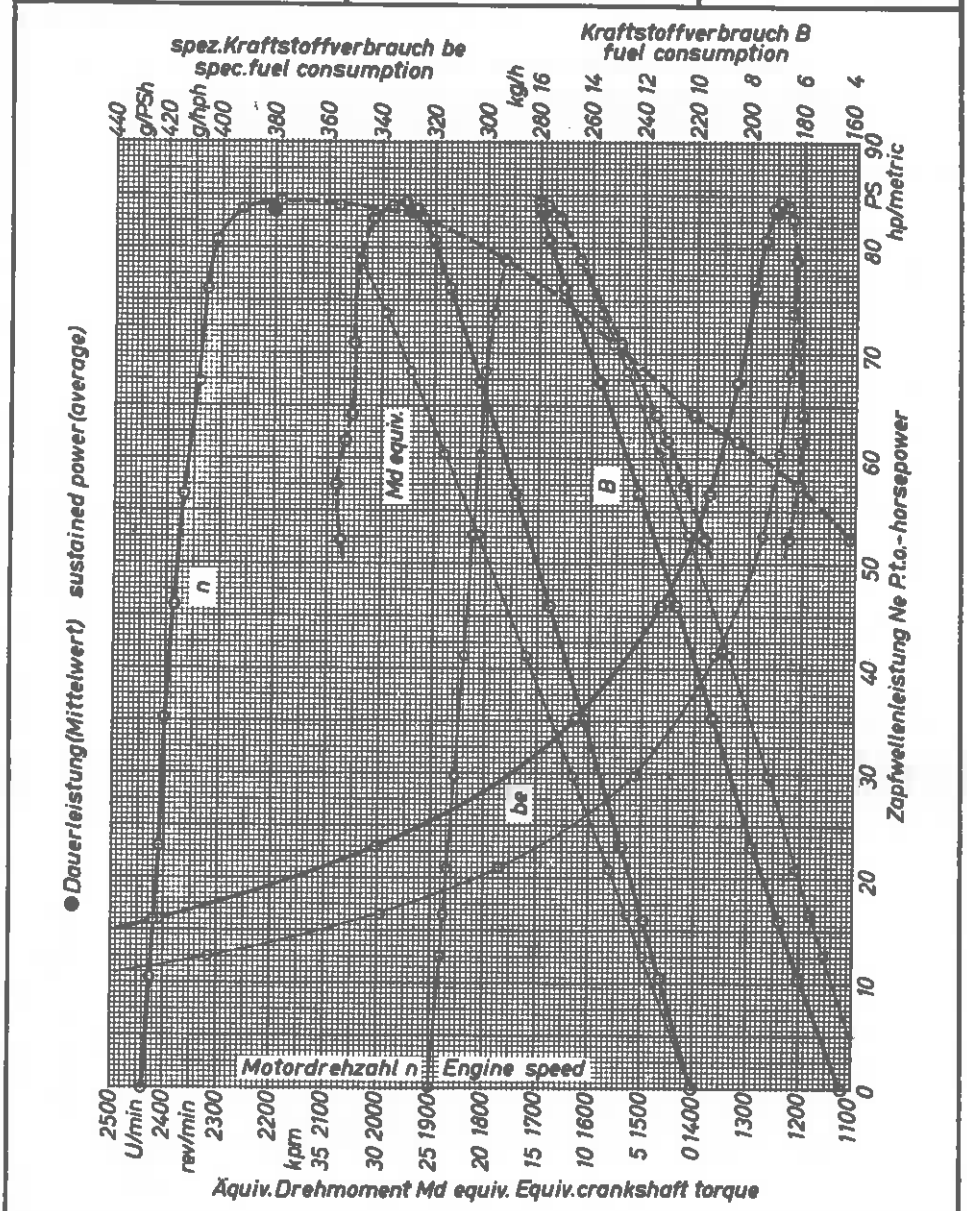


Motor Nr.: 610t-1112	Barometerstand: 729mm Hg	Kühlwassertemp: 92°C	Versuchstag: 2.3.1970	Vers.-Leitung:
Schlepper Nr: 395-1109	Lufttemperatur: 26/22°C	Öltemperatur: 96/99°C	Versuchs Nr: 93/Za 85	A. Reitbauer
Kraftstoff: 0,840/15°C	Motoröl: Shell Rot. SAE 20	Kraftstofftemp: 60°C	Kurvenblatt: 1	

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Kraftstoff: 0,840/15°C	Motoröl: Shell Rot. SAE 20	Kraftstofftemp.: 60°C	Kurvenblatt: 2	

(2) DRAWBAR PERFORMANCE (at 1,5 kp/cm^2 tyre pressure)

Date of tests: 26th May to 9th June 1970

Type of track: concrete

Height of drawbar above ground: 900 mm with ballast, 865 mm without ballast

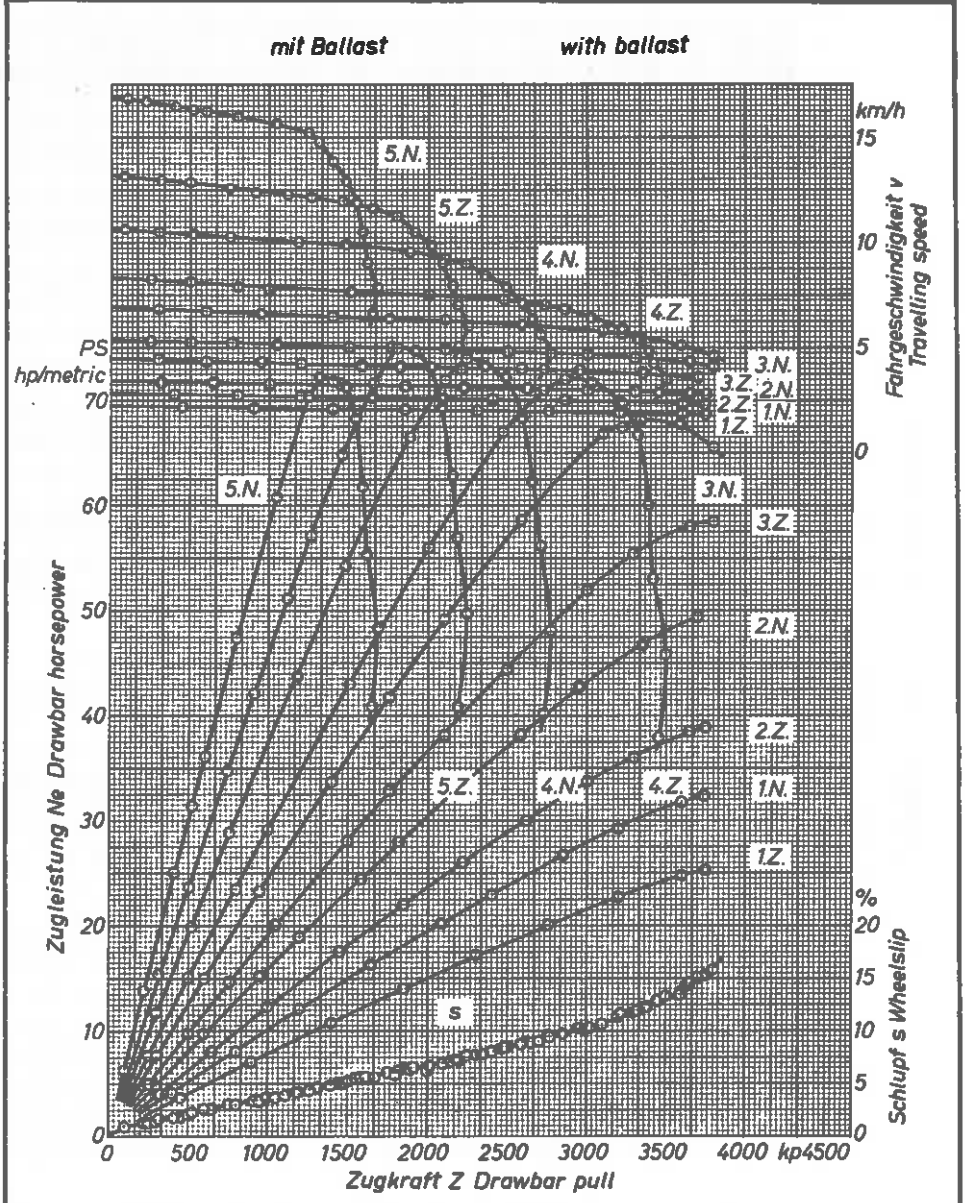
Gear No. Group	Speed km/h	Horse-power (metric) hp	Drawbar pull kp	Engine speed rev/min	Slip of wheels %	Fuel consumption		Temperatures			Atmospheric conditions		
						Metric drawbar hph/l	Specific g/hph	Fuel °C	Coolant °C	Engine oil °C	Tempe-rature °C	Relative humidity %	Pressure mm Hg
(i) MAXIMUM POWER (ballasted)													
1.I.	1,82	25,2	3750	2370	15,3	-	-	58	84	84	24	56	739
1.H.	2,34	32,4	3740	2355	15,1	-	-	58	84	84	24	60	739
2.I.	2,80	38,9	3750	2330	15,2	2,17	387	55	82	83	24	62	739
2.H.	3,60	49,3	3700	2310	15,1	2,67	314	52	83	82	22	64	739
3.I.	4,15	58,4	3800	2240	15,8	3,05	275	52	83	82	21	70	739
3.H.	5,54	68,1	3320	2220	12,3	3,59	234	59	83	84	26	55	737
4.I.	6,79	72,0	2860	2215	9,8	3,78	222	57	82	83	22	60	737
4.H.	8,95	73,9	2230	2200	7,3	3,89	216	55	81	82	21	75	737
5.I.	11,25	75,0	1800	2205	5,8	3,93	214	55	82	84	21	80	737
5.H.	14,76	72,2	1320	2210	4,6	3,82	220	50	82	80	20	85	737
(ii) Five hour test at 75 % of pull at maximum power													
4.I.	7,47	59,5	2150	2340	6,0	3,57	235	60	82	88	23	70	739
(iii) Five hour test at pull corresponding to 15 % wheelslip in test (i)													
3.H.	4,65	65,5	3800	1950	15,6	3,58	235	62	84	92	18	65	740
(v) MAXIMUM POWER (unballasted)													
1.I.	1,86	20,0	2900	2395	15,2	-	-	59	82	83	24	60	740
1.H.	2,39	25,7	2900	2385	15,1	-	-	57	82	83	24	62	740
2.I.	2,90	31,2	2900	2380	15,2	2,18	384	57	82	83	22	62	740
2.H.	3,73	40,0	2900	2370	15,3	2,58	325	55	82	83	20	62	740
3.I.	4,44	47,7	2900	2355	15,2	2,86	293	55	80	82	20	65	740
3.H.	5,69	61,0	2900	2330	15,2	3,38	249	50	80	82	20	65	740
4.I.	6,39	68,6	2900	2200	15,3	3,62	232	58	82	84	20	60	742
4.H.	8,89	72,4	2200	2210	9,3	3,82	220	56	82	84	20	60	742
5.I.	11,19	73,4	1770	2210	7,3	3,86	217	54	80	82	20	60	742
5.H.	14,76	71,9	1315	2200	5,2	3,78	222	54	78	80	18	65	742

Total oil consumption during ten hours duration of tests (ii) and (iii): 106 g/h

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Zugprüfung
Drawbar-test

Steyr-Dieseltraktor
Typ 90
Mot. Typ Steyr WD610t

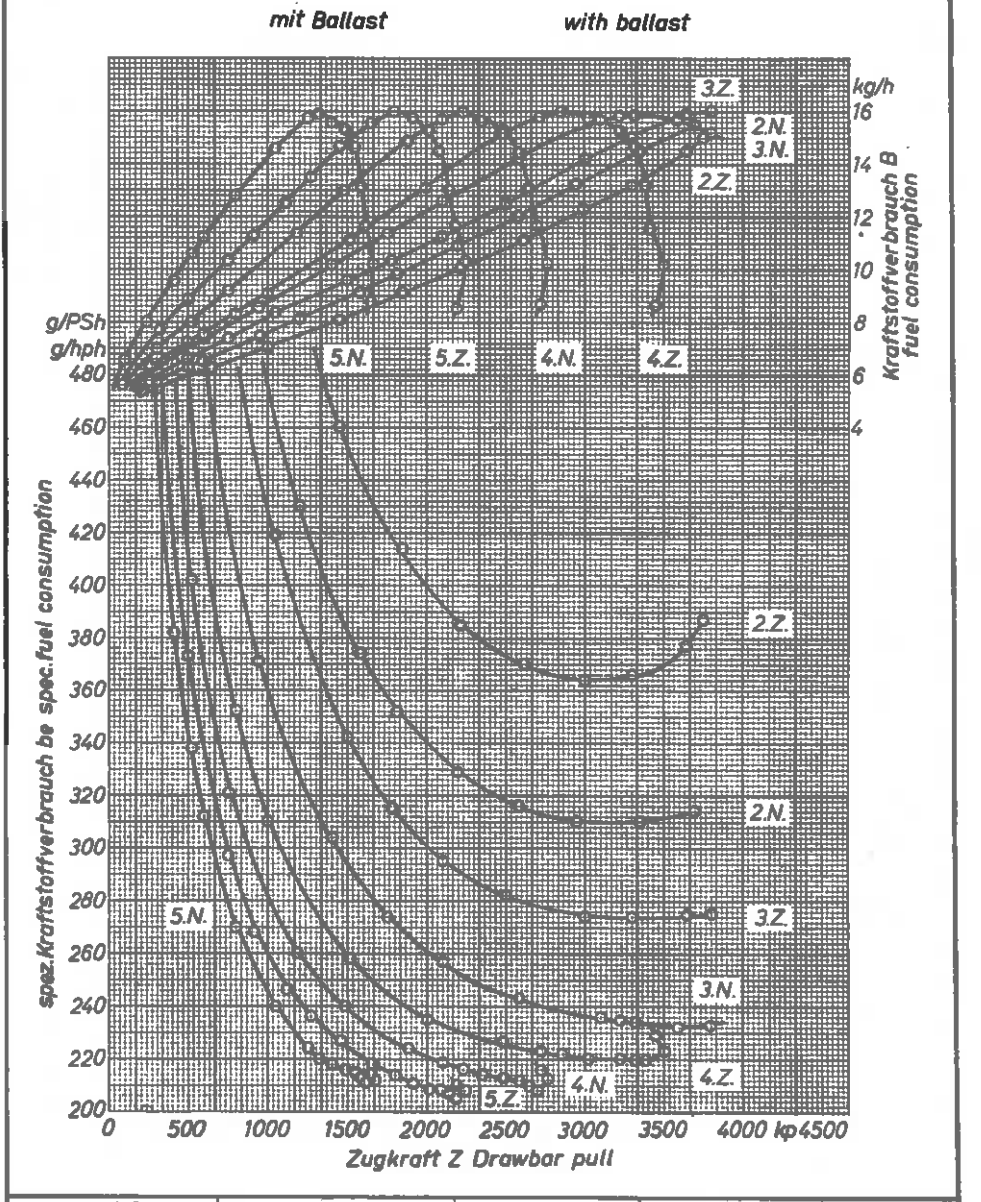


Motor Nr.: 610t-1112	Barometerstand: 737 mm Hg	Kühlwassertemp: 81°C	Versuchstag: 9. 6. 1970	Vers.-Leitung:
Schlepper Nr.: 395-1109	Lufttemperatur: 18-26°C	Öltemperatur: 80-84°C	Versuchs Nr.: 93/Zu453-457	
Kraftstoff: 0,840/15°C	Motoröl: Shell Rot. SAE 20	Kraftstofftemp: 55°C	Kurvenblatt: 3	A. Reitlinger

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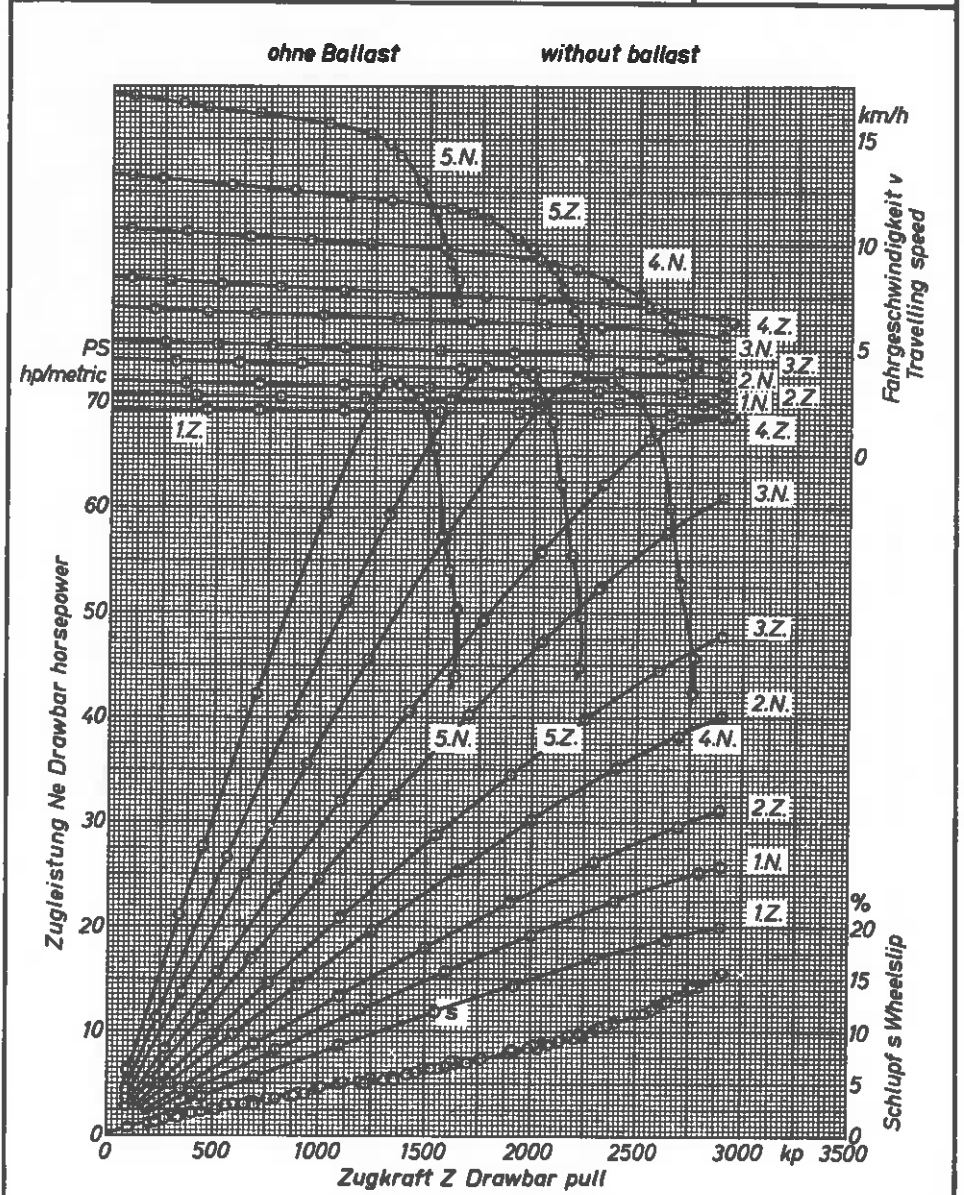


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Zugprüfung
Drawbar-test

Steyr-Dieseltraktor
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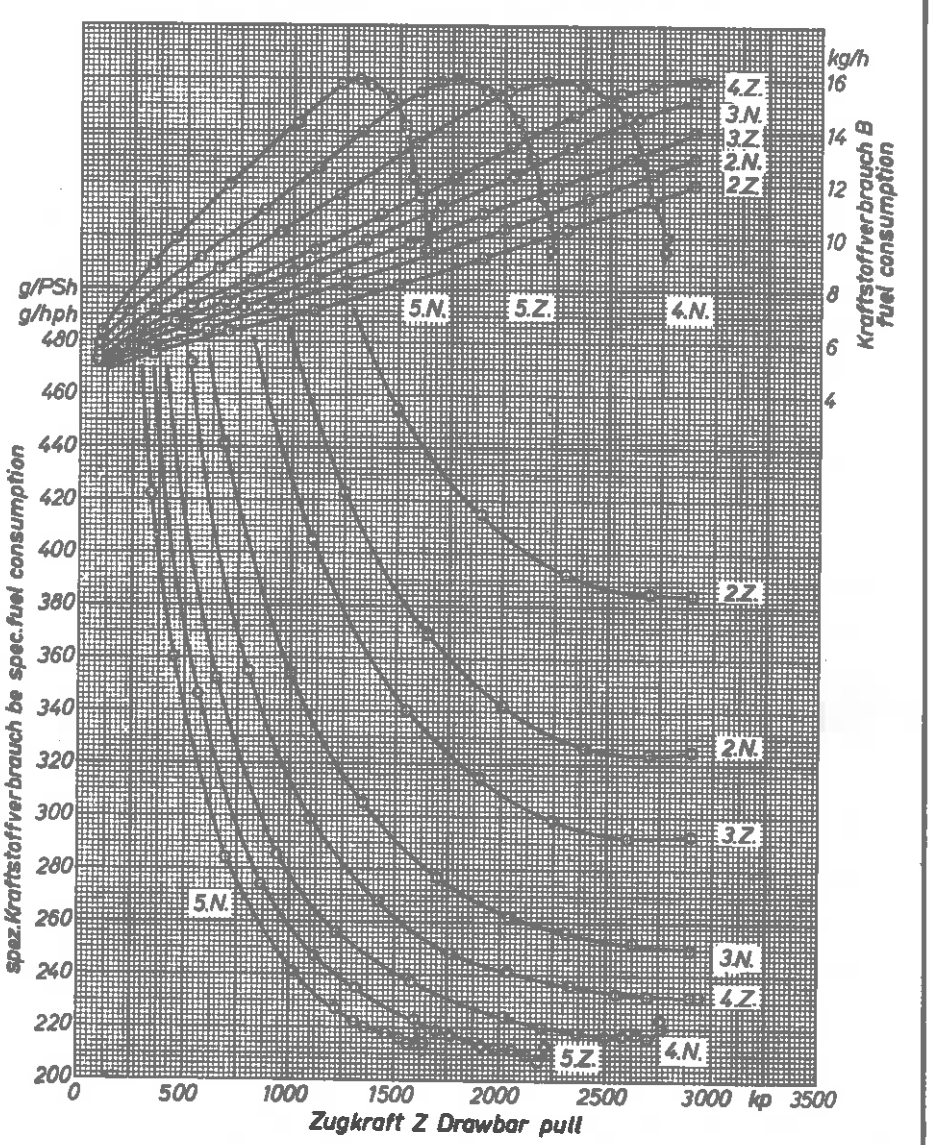


Motor Nr.: 610t-1112	Barometerstand: 742 mm Hg	Kühlwassertemp: 75-82°	Versuchstag: 26.5.70	Vers.-Leitung:
Schlepper Nr.: 395-1109	Lufttemperatur: 18-20°C	Öltemperatur: 80-84°	Versuchs Nr: 93/Zu 449-452	
Kraftstoff: 0.840/15°C	Motoröl: Shell Rot. SAE20	Kraftstofftemp: 55°C	Kurvenblatt: 5	A. Reitler

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WIESELBURG A.D. ERLAUF
PROTOKOLL NR. 031/70

Zugprüfung
Drawbar - test

Steyr-Dieseltraktor
Typ 90
Mot. Typ Steyr WD 610t



Motor Nr.: 610t-1112	Barometerstand: 742 mm Hg	Kühlwassertemp: 75-82°	Versuchstag: 26.5.70	Vers.-Leitung:
Schlepper Nr.: 395-1109	Lufttemperatur: 18-20°C	Öltemperatur: 80-84°C	Versuchs Nr.: 93/Zu 449-452	
Kraftstoff: 0.840/15°C	Motoröl: Shell Rot. SAE20	Kraftstofftemp.: 55°C	Kurvenblatt: 6	A. Peither

(3) TURNING SPACE AND TURNING CIRCLE

Details of wheel equipment-front: 7,50-20 AS Front, 6 ply, without ballast
rear: 18,4/15-34 AS, 6 ply, without ballast

Track of wheels-front: 1500mm, rear: 1644mm

Results	With brakes		Without brakes	
	right-hand	left-hand	right-hand	left-hand
	m	m	m	m
Radius of turning space	3,94	4,07	4,375	4,445
Radius of turning circle	3,84	3,97	4,275	4,345

(4) LOCATION OF CENTRE OF GRAVITY

Without ballast

Height above ground mm	857
Distance forward from the vertical plane containing the axis of the rear wheels	922
Distance from the median plane	0

(5) BRAKING

Date of tests: 1st Juni 1970

Type of track: concrete

Type of decelerometer: Recorder for deceleration and force on pedal MOTO-METER No. 03382, Tüf-Typ-Prüf.-Nr.04/ Stuttgart

Weight of ballasted tractor: 5355 kg

Cold brakes

	Ballasted	Without ballast
Travelling speed of the tractor	25 km/h	25 km/h
(i) Deceleration (m/s^2)	4,5	5,5
(ii) Stopping distance (m)	8,1	6,5
(iii) Force exerted on the brake pedal (kp)	46	40
(iv) Force exerted on the brake pedal to achieve a deceleration of 2,5 m/s^2 (kp)	20	16

Brake fade characteristics (hot test)

Deceleration:	hot/cold x 100	80 %
Stopping distance:	cold/hot x 100	90 %
Force on pedal:	cold/hot x 100	108 %

Parking brake

Efficiency of handbrake:

facing up slope	good
facing down slope	good
Pull on handbrake:	13 kp

(6) MEASUREMENT OF AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 19th June 1970

Type of sound level meter: Precisions Sound Level Meter Type 2203 Brüel & Kjäer/Copenhagen

Type of track: concrete (on open land)

Results of tests:

Gear:	6th N
Travelling speed:	19 km/h
Sound level:	89 dBA

(7) NOISE MEASUREMENT AT THE DRIVER'S EAR LEVEL

Date of tests: 19th June 1970

Type of sound level meter and octave filter: Precisions Sound Level Meter Type 2203, Brüel & Kjäer/Copenhagen

Type of track: concrete

Type of frequency analyser: octave analysator 2203

Sone evolution according to Stevens

Results of tests

Gear No.	Travelling speed *)	dbA	Sone
3.N.	6,12 km/h	96	
4.I.	7,42 km/h	97	104
4.N.	9,61 km/h	97	
5.I.	11,80 km/h	97	
5.N.	15,60 km/h	97	

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

(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date and location of tests: 25th June 1970, Wieselburg

Hydraulic fluid:

make and type: SHELL TELLUS 23

viscosity: SAE 10 W

Type of linkage lock for transport: mechanically by two retaining clutches, which act on the gudgeons on the both lifting levers

Pump characteristics

i) Opening pressure of the relief valve: 175 kp/cm^2

Sustained pressure by the open relief valve 175 kp/cm^2

ii) Pump delivery rate at minimum pressure and rated engine speed 33,6 l/min

iii) Pump delivery rate 30 l/min

Delivery pressure 175 kp/cm^2

Power 16 hp

	Height above ground in down position		Vertical movement	Maximum force exerted through full range	Pressure	Lifting force when front of tractor lifts
	hitch point	frame				
	mm	mm	mm	kp	kp/cm^2	kp
Linkage giving maximum mechanical advantage						
At hitch points	505	-	520	3500	175	3150
On the frame	-	505	605	1850	174	2000
Linkage giving minimum mechanical advantage						
At hitch points	375	-	655	2850	175	3150
On the frame	-	390	735	1500	174	2000

OPTIONAL TESTS

(9) ENGINE TESTS

Date and location of tests: 20th November 1969, Wieselburg

Type of dynamometer: Siemens-Schuckert pendulum generator G 273/15

Horsepower (metric) hp	Engine speed rev/min	Fuel consumption total l/h	Fuel consumption specific g/hph	hph/l
MAXIMUM POWER - 2 hours test				
90,8	2200	19,15	177	4,74
STANDARD p.t.o. SPEED (540/1000 rev/min)				
84,0	1765	17,3	173	4,855
THE SPEED RECOMMENDED BY THE MANUFACTURER FOR DRAWBAR WORK				
90,8	2200	19,15	177	4,74
PART LOADS				
(i) 85% of torque at maximum power				
82,5	2335	18,1	184	4,558
(ii) unloaded				
0	2450	4,88	-	-
(iii) 50% of the load defined in (i)				
49,75	2390	12,67	214	3,925
(iv) maximum power				
91,2	2200	19,16	176	4,758
(v) 25% of the load defined in (i)				
25,0	2420	8,93	300	2,80
(vi) 75% of the load defined in (i)				
73,5	2350	16,54	189	4,445

Optimum fuel consumption: 170 g/hph at 69 hp and 1395 rev/min

No load maximum engine speed: 2450 rev/min

Torque at maximum power: 29,7 kpm

Maximum torque: 36,4 kpm at 1175 rev/min of the engine

Means atmospheric conditions: temperature: 17°C
pressure: 738 mm Hg
relative humidity: 65 %

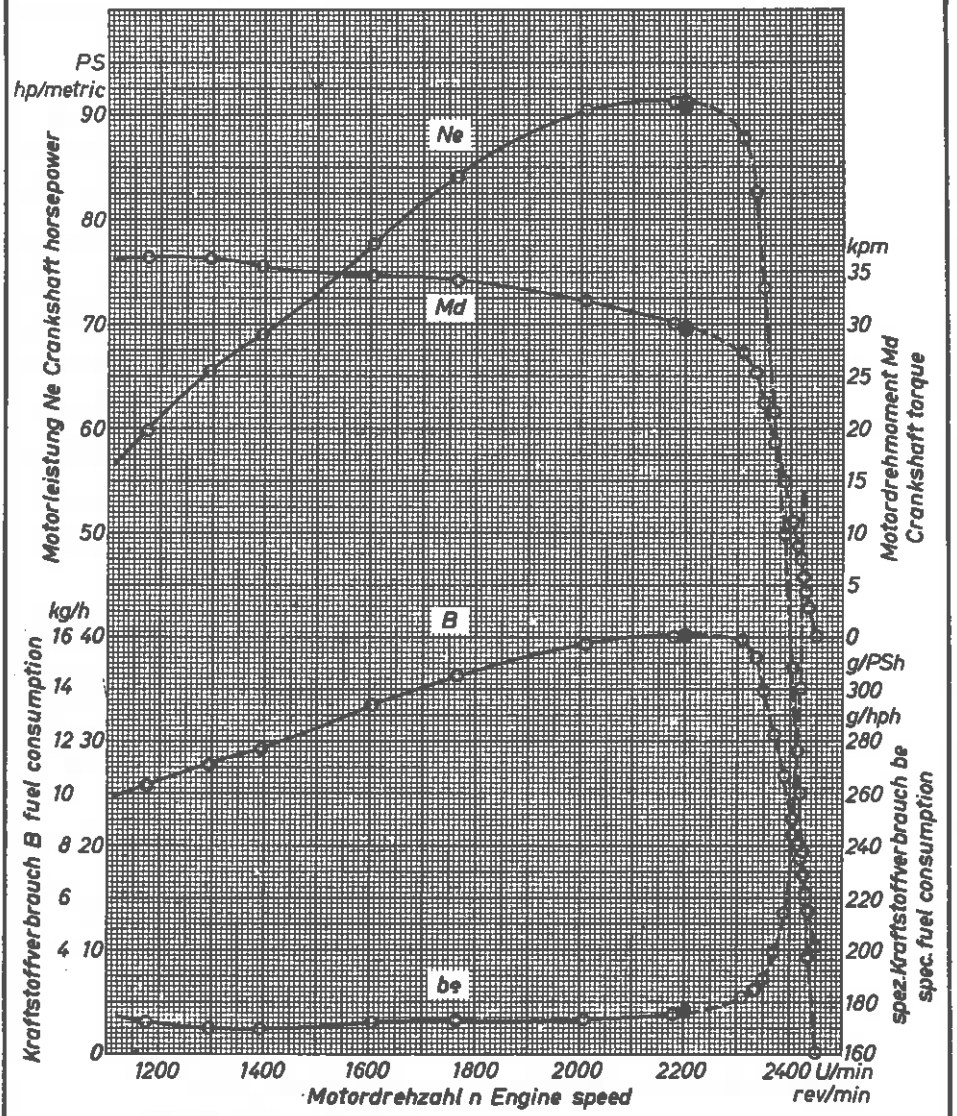
Maximum temperature: coolant: 83°C
engine oil: 101°C
fuel: 53°C

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Motorprüfung
Engine - test

Steyr-Dieseltraktor
Typ 90
Mot. Typ Steyr WD 610t

● Dauerleistung (Mittelwert) sustained power (average)

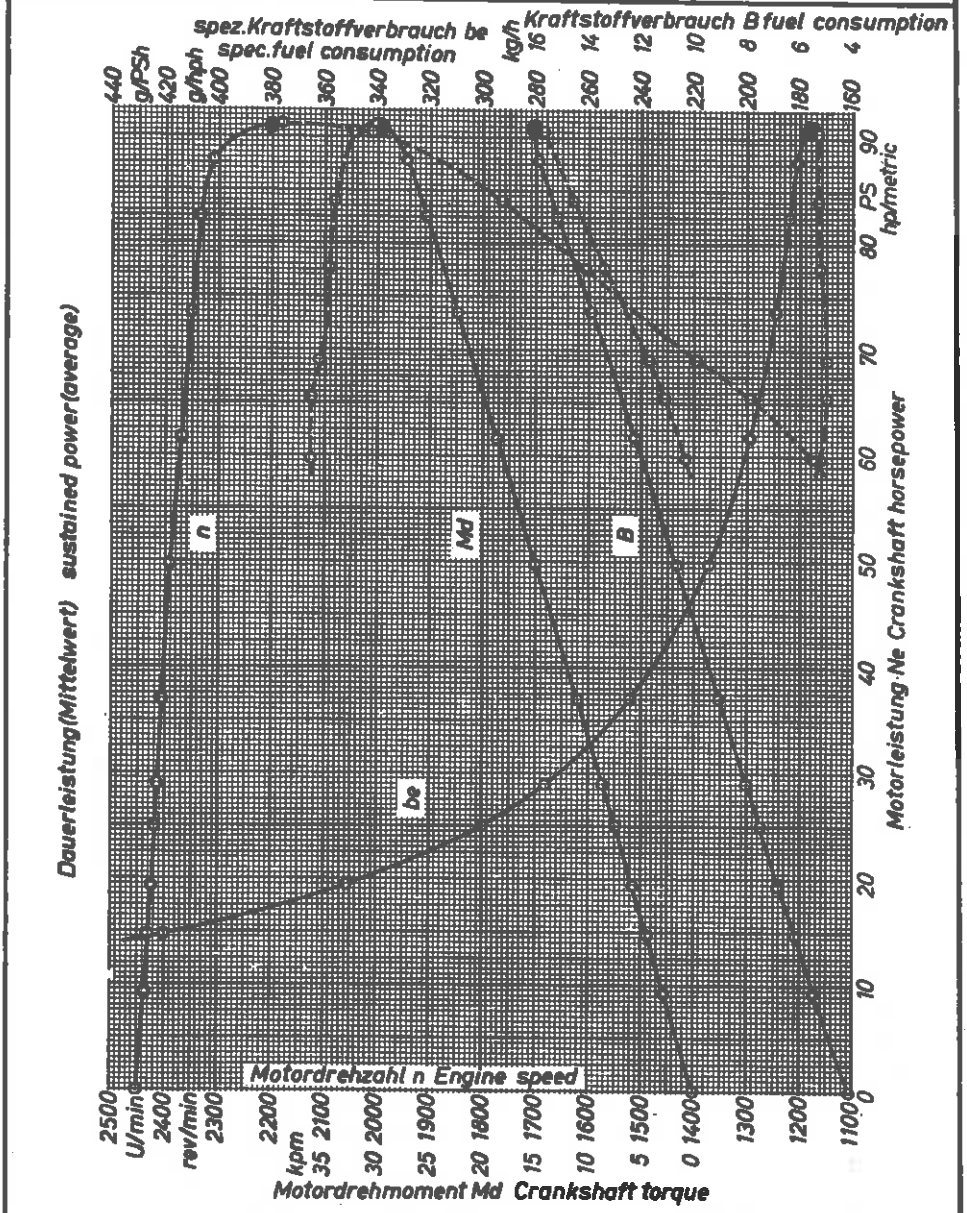


Motor-Nr.: 610t-1112	Barometerstand: 738 mm Hg	Kühlwassertemp.: 82 °C	Versuchstag: 20.11. 69	Vers.-Leitung:
Schlepper Nr.: 395-1109	Lufttemperatur: 17/20 °C	Öltemperatur: 88/100°	Versuchs Nr.: 93/M122	A. Reitlen
Kraftstoff: 0.840/15 °C	Motoröl: Shell Rot. SAE 20	Kraftstofftemp.: 46/53°	Kurvenblatt: 7	

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Motorprüfung
Engine - test

Steyr-Dieseltraktor
Typ 90
Mot. Typ Steyr WD 610t



Motor Nr.: 610 t - 1112	Barometerstand: 738 mmHg	Kühlwassertemp.: 82°C	Versuchstag: 20.11.69	Vers.-Leitung:
Schlepper Nr.: 395-1109	Lufttemperatur: 17/20°C	Öltemperatur: 88/100°	Versuchs Nr: 93/M122	A. Reiter
Kraftstoff: 0.840/15°C	Motoröl: Shell Rot. SAE 20	Kraftstofftemp.: 46/53°	Kurvenblatt: 8	

OPTIONAL TESTS

(10) PERFORMANCE AT THE BELT PULLEY SHAFT

Date and location of tests: 5th March 1970, Wieselburg

Type of dynamometer: Siemens-Schuckert pendulum generator G 273/15

Horsepower (metric) hp	Engine speed rev/min	Fuel consumption total l/h	Fuel consumption specific g/hph	Fuel consumption hph/l
MAXIMUM POWER - 2 hours test				
81,8	2200	19,07	196	4,29
STANDARD p.t.o. SPEED (540/1000 rev/min)				
76,4	1770	17,37	191	4,40
STANDARD BELT SPEED (21,2 m/s)				
81,2	2182	18,95	196	4,285
THE SPEED RECOMMENDED BY THE MANUFACTURER FOR DRAWBAR WORK				
81,8	2200	19,07	196	4,29
PART LOADS				
(i) 85% of torque at maximum power				
73,0	2335	17,99	207	4,06
(ii) unloaded				
0	2440	5,42	-	-
(iii) 50% of the load defined in (i)				
44,0	2390	13,05	249	3,37
(iv) maximum power				
81,2	2210	19,01	196	4,27
(v) 25% of the load defined in (i)				
22,2	2410	9,67	366	2,295
(vi) 75% of the load defined in (i)				
65,0	2350	16,49	213	3,94

No load maximum engine speed: 2440 rev/min
Torque*) at maximum power: 26,35 kpm
Maximum torque*): 32,8 kpm at 1185 rev/min of the engine

Means atmospheric conditions: temperature: 20°C
pressure: 725 mm Hg
relative humidity: 50 %

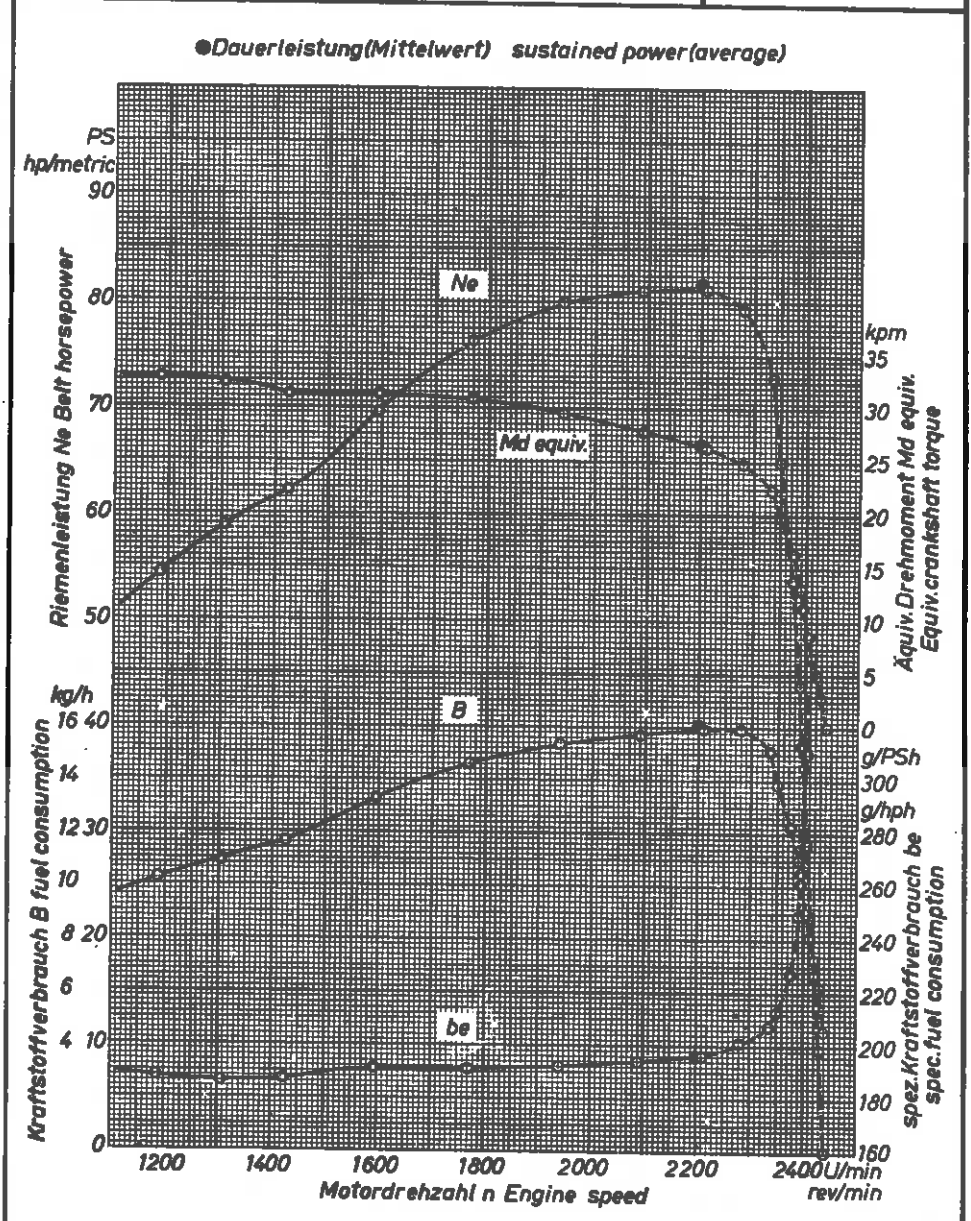
Maximum temperature: coolant: 95°C
engine oil: 103°C
fuel: 64°C

*) The torque reported is the equivalent crankshaft torque

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Riemenleistung Belt - test

Steyr-Dieseltraktor Typ 90
Mot. Typ Steyr WD 610t

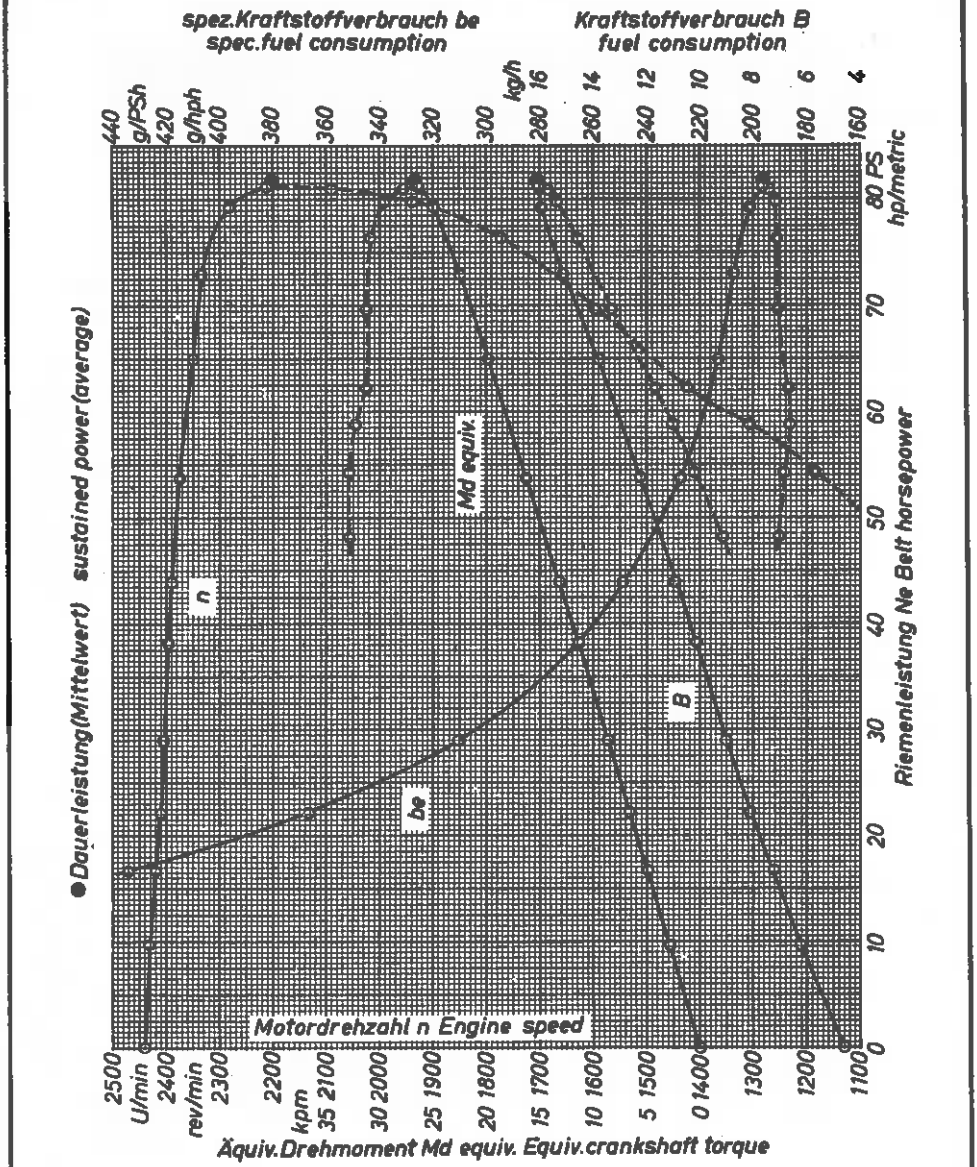


Reifen Nr.: 610t-1112	Barometerstand: 725mmHg	Kühlwassertemp: 88/93°	Versuchstag: 5.3.1970	Vers.-Leitung:
Schlepper Nr.: 395-1109	Lufttemperatur: 26°C	Öltemperatur: 92/98°C	Versuchs Nr.: 93/R22	A. Reitbauer
Kraftstoff: 0.840/15°C	Motoröl: Shell Rot. SAE 20	Kraftstofftemp: 58/61°	Kurvenblatt: 9	

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Riemenleistung
Belt - test

Steyr-Dieseltraktor
Typ 90
Mot. Typ Steyr WD 610t



Motor Nr.: 610t-1112	Barometerstand: 725 mm Hg	Kühlwassertemp: 88/93°	Versuchstag: 5.3.1970	Vers.-Leitung:
Schlepper Nr.: 395-1109	Lufttemperatur: 26°C	Öltemperatur: 92/98°C	Versuchs Nr.: 93/R 22	A. Reitler
Kraftstoff: 0,840/15°C	Motoröl: Shell Rot. SAE 20	Kraftstofftemp: 58/61°	Kurvenblatt: 10	