O.E.C.D. Report No.: 715

BUNDESVERSUCHS - UND PRÜFUNGSANSTALT
für landwirtschaftliche Maschinen und Geräte,
Wieselburg

Dieseltractor

Trade name:

STEYR 8070a

Manufacturers signature:

STEYR 337.35



Date of approval: 1981 06 02

Date of test: 1980 05 21

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

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Tractor manufacturer:	STEYR-DAIMLER-PUCH AG., Steyr, Austria STEYR-HELLAS ABE., Sindos, Greece
Submitted for test by:	Manufacturer
Selected by:	Manufacturer by agreement with BVPA-Wieselburg
Place of running in:	Steyr, Austria
Duration of running in:	120 hours

SPECIFICATION OF TRACTOR

Tractor:

Make:	STEYR-DAIMLER-PUCH AG.
Model:	Diesel-Tractor STEYR 337.35 Trade name: STEYR 8070a
Type:	Wheel tractor, four-wheel driven, unit construction
Serial No.:	337.35 - 01001

Engine:

Make:	Own make
Model:	WD 411.41
Type:	4 stroke diesel engine with direct injection
Serial No.:	411.41 - 1000
Cylinders:	4, vertical in line Bore/stroke: 100/110 mm Capacity: 3456 cm^3 Compression ratio: 16,2 Wet liners
Valves:	Overhead valves
Fuel system:	Capacity of fuel tank: appr. 96 l Optional: small tank appr. 64 l Fuel feed by gravity BOSCH fuel filter Dual filter with water trap and changeable elements, model 0450 134002 Fuel precleaner FJSJ 1/1Z BOSCH distributor injection pump Prototype model: VA 4/9 H 1200 CRV 3671 Serial model: VA 4/9 H 1200 CR 144-2 Manufacturers production setting: 42^{+0}_{-2} mm^3/stroke at 2400 rev/min and full load Injection timing: 24^{+0}_{-2} before TDC at 1 mm pump stroke

Fuel system: (cont.)

Injectors:
BOSCH
Multi hole injection nozzles DLLA 150 S 798 or
FRIEDMANN & MAIER
Multi hole injection nozzles D 1 LMK 150/54

Injection pressure: $21,6^{+0.5}_{-0}$ MPa (216^{+5}_{-0} bar)

Governor:

BOSCH variable speed governor
Hydraulically acting, incorporated in injection pump
Range of speed: 600 to 2580 rev/min
Rated speed: 2400 rev/min

Air cleaner:

MANN & HUMMEL or PUROLATOR/KNECHT
Main-cleaner: Dry type with changeable element and electrical indicator
Model: MANN & HUMMEL 45.114.65.414;
optional: additional safety element CF 600
PUROLATOR LP 045/1;
optional: additional safety element AF 3098 or
KNECHT SE 045
Pre-cleaner: Cyclonic type, transparent dust container
Model: MANN & HUMMEL 48.030.67.900

Exhaust silencer:

EBERSPÄCHER
Reflexion type, at left side of the engine, mouth upwards 2486 mm above ground, 150 mm left of median plane
Model: T 16.47.476.10.0.00 with safety cab 110.11
T 16.47.476.11.0.00 with safety cab 110.12

Lubrication:

Forced lubrication with EATON pump, strainer in sump, paper filter in full flow
Oil capacity: appr. 9 l
Changing interval: 200 hours; paper filter: 400 hours
Recommended oil viscosity: SAE 20 W/40 HD,
SAE 10 W/30 HD in cold environment
(MIL-L-2104 B, MIL-L-46 152)

Cooling system:

Double circuit water cooling with centrifugal pump, pump and 4 blade fan (dia: 420 mm) belt driven
Tubular radiator, longtime filling with frostprotection down to -20°C
Thermostat control, cooling water thermometer and sight glas for level indication
Coolant capacity: appr. 15,5 l (17 l with cab heating)
Overpressure: max. 50 kPa (0,5 bar)
Joining for warm water heating

Starting system:

Electrically
BOSCH solenoid engaged starter, model: 0 001 367 011 JF
12 V, 3 kW
Cold starting aid: BERU or BOSCH
2 glow plugs in intake pipe, BERU model 184 G or
BOSCH model A 250 00.1088

Electrical system:	Voltage: 12 V, negative earth Generator: BOSCH, three phase type model G 1 – 14 V 28 A 22 – 392 W, 0 120 339 526 14 V, 28 A, 392 W Batteries: lead acid type, 1 with 135 Ah capacity at 20 hours rating

Transmission:

Clutches:	Clutch: FICHTEL & SACHS Dual plate dry clutch, model DUT 280 – 280/280, both plates 280 mm dia, independent activated or LUK same dimension Main clutch: 280 mm dia, pedal operated P. t. o. -clutch: 280 mm dia, hand lever operated Front wheel-clutch: Wet multiplate clutch, 135 mm dia, mechanically acting, hand lever operated
Gearbox:	Own make, mechanically acting, model 337 Basis model: (optional) reversing gear (FORWARD – REVERSE) combined with 4 speed change gear and reduction gear (ROAD-FIELD) Total: 8 forward and 8 reverse speeds Normal model: (as tested) 2 forward and 1 reverse group gear (FORWARD FAST, FORWARD NORMAL, REVERSE) combined with 4 speed change gear and reduction gear (ROAD – FIELD) Total: 16 forward and 8 reverse speeds Crawler gear model: (optional) Basis model with crawler gear reduction Reduction ratio: 3,398 Total: 16 forward and 16 reverse speeds Optional: synchronised helical 4 speed change gear Optional: top speed 25 km/h or 30 km/h (as tested)
Rear axle and final drive:	Own make, model 337 Central axle; pinion and bevel gear, lockable bevel gear differential, acting by planetary gears on rear wheels Differential lock: mechanically acting, foot lever operated, lockable, self-disengaging
Front axle and final drive:	ZF-PASSAU Steering axle, central type Driving shaft, pinion and bevel gear, bevel gear differential, half shafts, universal joints, planetary gears in wheel hubs Front wheel drive: mechanically engaged, hand lever operated Optional: automatically locking differential

Total ratios and speeds

Group	Gear No.	Number of engine revolutions for one revolution of driving wheel		Nominal travelling speed for rated speed of engine km/h *)	
		field L	road S	field L	road S
forward normal VN	1	402,16	120,34	1,55	5,19
	2	209,35	62,64	2,98	9,97
	3	140,82	42,14	4,43	14,82
	4	85,31	25,53	7,32	24,45
forward fast VS	1	327,03	97,86	1,91	6,38
	2	170,24	50,94	3,67	12,26
	3	114,52	34,27	5,45	18,22
	4	69,37	20,76	9,00	30,08
reverse R	1	327,03	97,86	1,91	6,38
	2	170,24	50,94	3,67	12,26
	3	114,52	34,27	5,45	18,22
	4	69,37	20,76	9,00	30,08

*) Calculated with index radius of 690 mm and test tyre equipment 12,4-36 AS

Oil capacity:

Gear box and rear axle: appr. 24,5 l
Final drives: appr. 2,7 l for each planetary gear
Recommended oil: SAE 90, MIL-L-2105
Front axle differential: appr. 4,75 l SAE 90-API GL 5 MIL-L-2105 B
Front axle final drives: appr. 0,75 l each side SAE 90 MIL-L-2105
Changing interval: uniformly 1000 hours or one year

Power take off:

At rear of tractor, in median plane, 395 mm behind rear axle, 580 mm above ground (690 mm tyre index radius)
Dimension: ISO R 500, Type 1 (35 mm, 6 splines)

Proportional to engine speed (independent) p.t.o.:
P.t.o. shaft driven by p.t.o. clutch and speed selector
Speeds:
540/ 634 rev/min at 2044/2400 rev/min engine speed
1000/1127 rev/min at 2130/2400 rev/min engine speed
Engine speed resp. p.t.o. speed indication by "Traktormeter"
Direction of rotation: clockwise viewed from driving end

Power take off: (cont.)

Proportional to ground speed p.t.o.:

Only engageable when reduction gear is on O (NEUTRAL = stationary) or L (FIELD) position. P.t.o. shaft driven by main clutch, group gear, 4 speed change gear and reduction gear (only in position O or L (FIELD)).

Driving mode (reduction gear in L position):

Travelling distance for 1 revolution of p.t.o.:
0,111 m with 690 mm tyre index radius (9,01 rev/m)

Number of p.t.o. revolutions for 1 revolution of driving wheel: 38,95

Stationary mode (reduction gear on O position, tractor not driving):

Speeds at 2400 rev/min rated engine speed (rev/min):

30 km/h model as tested

Group gear:	VN	VS	R
Gear No.: 1	286	232	286
2	549	447	549
3	816	664	816
4	1348	1096	1348
Direction of rotation	clockwise	clockwise	anticlockwise
	viewed from driving end		

25 km/h model (not tested)

Group gear:	VN	VS	R
Gear No.: 1	193	232	223
2	370	447	429
3	550	664	638
4	908	1096	1053
Direction of rotation	clockwise	clockwise	anticlockwise
	viewed from driving end		

Middle p.t.o.:

Optional, not on tested tractor

Forward direction, on the left side of the gearbox, 186,5 mm left hand of median plane of tractor, 580 mm above ground, 651 mm before rear axle

Dimensions: ISO R 500, Type 1 (35 mm, 6 splines)

No power restriction

Driven by p.t.o. clutch

Speed: 1000/1183 rev/min at 2029/2400 rev/min engine speed

Direction of rotation: anticlockwise viewed from the driving end

Front p.t.o.:

Optional, not on tested tractor
Forward direction, on the left side of the tractor, 310 mm left hand of median plane, 670 mm above ground, 468 mm before front axle
Driven by middle p.t.o. and propellershaft with intermediate bearing
No power restriction
Same speeds and direction of rotation of middle p.t.o.

Belt pulley:

Optional, not on tested tractor
At rear of tractor, perpendicular transmission on rear p.t.o., all speeds of rear p.t.o. engageable
Dimensions: 250 mm dia, 160 mm width
Number of pulley revolutions for 1 revolution of p.t.o.: 2,23

Power lift:

In the rear:

Own make, open center type
Draught control with two stage pull adjustment and upper link sensing, position control, floating position
"STEYR SIMPLEMATIK" standard linkage, categorie I/II, double hole lift arms, in accordance to ISO 730
BOSCH gear type pump, directly driven by engine
BOSCH control unit
Own oil supply, capacity: 14 l (15 l with oil tappings)
Recommended oil: SAE 20 W, MIL-L-2104 B
Working cylinder: single acting type, bore/stroke: 85/152 mm
Optional (not on tested tractor):
WALTERSCHEID linkage quick coupler, category II

Oil tappings: up to 3 oil circuits with BOSCH control units for single or double acting cylinders
Capacity of tappings: 6 l

Optional (not on tested tractor):
Increased capacity of oil tappings up to 17 l with 11 l supplementary tank

In the front:

Optional (not on tested tractor)
Three point linkage, category II, open system, hydraulic power lift, disintegrated construction
Oil supply from own control unit and common oil supply with power lift in the rear
Single acting cylinder, bore/stroke: 60/250 mm

Holed drawbar: Fitted in the clevis of the lower links of the threepoint linkage, category I or II

Dimensions of the holed drawbar	category I	category II
Number of holes	5	7
Hole diameter mm	33	33
Distance between holes mm	130	115

Height above ground*)		Min. lift rod length (basis adjustment)	Max. lift rod length
Lift arm length:	200 mm	from 450 to 965 mm	from 220 to 805 mm
	240 mm	from 340 to 955 mm	from 105 to 788 mm

*) Calculated with tyre index radius of 690 mm

Method of changing: by power lift, lift rod and lift arm length
Distance to rear axle: 970 mm (lower links horizontally)
Distance relative to p.t.o.: 574 mm

Pull attachement:

Trailer hitch: ROCKINGER
Fork type, model 273 Q

Height above ground:	412/440/745/773 mm
Distance from rear axle:	447 mm
Position relative to p.t.o.:	rearwards 52 mm
Diameter of coupling pin:	30,5 mm
Maximum vertical load:	15 kN

Optional (not on tested tractor):
ROCKINGER automatic coupler model 248
Fork type, height adjustable in 2 positions

Height above ground:	753/765 mm
Distance from rear axle:	494 mm
Position relative to p.t.o.:	rearwards 99 mm
Diameter of coupling pin:	30 mm
Maximum vertical load:	15 kN

or ROCKINGER model 273 J
Fork type

Height above ground:	636/677/719/760 mm
Distance from rear axle:	534 mm
Position relative to p.t.o.:	rearwards 139 mm
Diameter of coupling pin:	30,5 mm
Maximum vertical load:	15 kN

Trailer hitch: (cont.)	or ROCKINGER automatic coupler, model 279		
	Fork type		
	Height above ground:		631/682/714/765 mm
	Distance from rear axle:		542 mm
	Position relative to p.t.o.:	rearwards	147 mm
	Diameter of coupling pin:		30 mm
	Maximum vertical load:		15 kN
	or own make		
	Fork type (italian equipment)		
	Height above ground:		416/749/769 mm
	Distance from rear axle:		407 mm
	Position relative to p.t.o.:	rearwards	12 mm
	Diameter of coupling pin:		28 mm
	Maximum vertical load:		15 kN
Towing hitch:	Fork type		
	Height above ground:		632 mm
	Distance from front axle:	frontwards	495 mm
	Diameter of coupling pin:		31 mm

Steering:

ZF-SCHWÄBISCH GMÜND
Hydrostatic steering, model ZF 8452
or DANFOSS equivalent model OS PC 125 OR
Own oil circuit with filter in the oil case, gear pump directly driven by engine
Changing interval of oil and filter: 1000 hours
Capacity of oil case: 1,75 l
Recommended oil: Automatic Transmission Fluid (ATF Dexron D or ATF M 2 C 33 E/F)
Delivery rate: 34,6 l/min
Working pressure: 10,0 MPa (100 bar)
Operated by steering wheel, acting on front wheels

Brakes: Own make

Service brake: Hydraulically acting inner brake (Simplex), 229 mm dia, 60 mm width, acting on differential shafts, pedal operated

Parking brake: Mechanically acting on separate inner brake, 229 mm dia, 30 mm width, acting on differential shafts, activated by hand lever with ratchet

Steering assistance brake: Operated by divided pedal of service brake

Optional brake equipment: (not on tested tractor)
Front wheel brake: Hydraulic activated dry disc brake on front wheels, max. dia 411 mm, active dia 356 mm
Trailer braking valve: high pressure air system, one or combination one and two line system, air-compressor V-belt driven
Storage pressure: $1,8^{+0,2}_{-0,0}$ MPa (18^{+2}_{-0} bar)
Working pressure: 0,72 MPa
Storage capacity: 10 l

Wheels:

Front wheels: 2 pneumatics, steering and driving function, diagonal or radial carcass, tyre casing synthetic material
8,3-24 AS, PR 8; rim: W 7 x 24
Maximum permissible load on each tyre:
9520 N at 1,8 bar inflation pressure
13320 N at 2,25 bar inflation pressure and
max. 8 km/h driving speed for front implement working
Track width: 1514 mm (1634 mm by reversing wheels)

Optional front wheel equipment:
10,5-20 MPT, PR 6 with rim 9 x 20
Maximum permissible load on each tyre:
12265 N at 2,5 bar inflation pressure
24035 N at 3,12 bar inflation pressure and
max. 8 km/h driving speed for front implement working

Rear wheels: 2 pneumatics, driving function, diagonal or radial carcass sheet metal mudguards integrated in the safety cab
12,4-36 AS, PR 6; rim: W 10 x 36
Maximum permissible load on each tyre:
14130 N at 1,7 bar inflation pressure
Track width: 1524 mm (1372 mm by reversing wheels) with adjustable rim 1304, 1418, 1478, 1582, 1664 and 1778 mm

Optional rear wheel equipment:
16,9-30 AS, PR 6 or 8; rim: DW 14 x 30
13,6-36 AS, PR 6; rim: W 12 x 36

Wheel base: 2180 mm

Lighting:

Unrestricted beam angle of head light in plan view: 92 mrad (5,27°)

	*) Height above ground of centre mm	Dimension mm	Distance from outside edge of tractor to centre mm
Head lights	917	135 x 115	755
Side Lights	1530	80 x 65	175
Rear lights	1530	80 x 65	175
Reflectors	1420 695	75 dia	135 460

*) with tyre equipment: 12,4-36 AS and 8,3/8-24 MPT
**) with overall width of 1799 mm

Number of grease points: 26

Driver seat:

BOSTROM
Model XH 2 TS 2; tested on tractor according to national regulation (Prot.Nr. 079/79)
X-lever suspension with torsion springs, adjustable to drivers weight
Hydraulically damping
Horizontal adjustment range: 140 mm
Vertical adjustment range: 70 mm

GRAMMER
Model DS 85 H/3; tested on tractor according to national regulation (Prot.Nr. 078/79)
X-lever suspension with 2 tension coil springs (force transmission by curve-disc and ball bearing)
Hydraulically damping
Horizontal adjustment range: 140 mm
Vertical adjustment range: 60 mm

Safety frame:

Own make
Model 110.01
Rubber mounted sheet construction with roof, windscreen, front cladding and rubber floor, without doors, claddings and damping materials, without side and rear glasses and without ventilation and heater.
Strength tested according to OECD-Code (identical to Austrian national legislation)
OECD-Nr.: CSD 0226/1-b(C)

Optional:
Own make
Model 110.02
Same construction, 120 mm lower
Strength tested to national legislation (identical to OECD-Code)

Safety cab:

Own make
Model 110.11
Same rubber mounted sheet construction as safety frame with windscreen, front cladding, rubber floor, with damping material, with doors and side and rear glasses and with ventilation and heater.
Strength tested according to OECD-Code (identical to Austrian national legislation)
OECD-Nr.: CSD 0226/1-a(C)

Optional:
Model 110.12
Same construction, 120 mm lower
Strength tested to national legislation (identical to OECD-Code)

CONDITIONS DURING TEST

Tractormass:

Tractor without driver but with tanks full and safety cab

	Front	Rear	Total
Without ballast	1200 kg	1802 kg	3002 kg
With ballast	1500 kg	2373 kg	3873 kg

Ballastmass:

	Number of weights	Total mass (excluding water)	Water
Front	5	183 kg	90 kg
Rear	4 + 2	298 kg	300 kg
Additional	-	-	-

Track setting and tyre equipment:

1514 mm at front
1524 mm at rear
Front wheels: 8,3-24 AS, PR 8; rim: W 7 x 24
Rear wheels: 12,4-36 AS, PR 6; rim: W 10 x 32

Overall dimensions:

	Length	Width		Height ***)
		max. *)	min. **)	
	mm	mm	mm	mm
With ballast	3898	2290	1710	2410/2473
Without ballast	3718	2290	1710	2410/2473

*) measured on front wheels
**) measured on mudguards of rear wheels
***) measured on top of: safety cab/exhaust pipe with basis tyre equipment

Minimum ground clearance: 335 mm under front axle differential with tyre equipment (8,3-24 AS)

Fuel and lubricants used in tests:

Fuel:	ELAN Diesel fuel (according to DIN 51601) specific gravity used for volumetric measurement: 0,855 kg/l at 15°C Viscosity at 20°C: 5 mm^2/s (5 cSt) Cetan no.: 50
Engine oil:	MOBIL OIL SPECIAL SAE 10 W-30 HD, MIL-L-2104 A Viscosity at 100°C: 10,6 mm^2/s (10,6 cSt)
Transmission oil:	SHELL SPIRAX 90 HD, MIL-L-2105 B Viscosity at 50°C: 112 mm^2/s (112 cSt)
Hydraulic oil:	SHELL Tellus 33, SAE 20 W Viscosity at 50°C: 40 mm^2/s (40 cSt)

COMPULSORY TESTS

1. Main power take-off performance

Date and location of tests: 1980 05 21, Wieselburg, Austria
Type of dynamometer: SCHENK-eddy current brake - W 780

Main test on: ISO R 500, Type 1 (DIN 9611) - 540 rev/min

Power	Speed		Fuel consumption		
	engine	p.t.o.	total	specific	specific
kW	rev/min	rev/min	kg/h l/h	g/kWh	kWh/l
MAXIMUM POWER					
Maximum power - 2 hours test					
39,18	2400	634	10,26 12,00	262	3,264
Standard p.t.o. speed					
38,23	2044	540	9,59 11,21	250,5	3,411
The speed recommended by the manufacturer for drawbar work					
39,18	2400	634	10,26 12,00	262	3,265
PART LOADS Governor hand lever in position giving maximum power					
(i) 85 % of torque at maximum power					
34,47	2483	656	9,43 11,03	273,5	3,126
(ii) unloaded					
-	2570	679	4,02 4,70	-	-
(iii) 50 % of the load defined in (i)					
17,56	2532	669	6,19 7,24	352,5	2,425
(iv) maximum power					
39,18	2400	634	10,26 12,00	262	3,265
(v) 25 % of the load defined in (i)					
8,85	2551	674	4,78 5,58	539	1,585
(vi) 75 % of the load defined in (i)					
26,12	2509	663	7,71 9,01	295	2,897

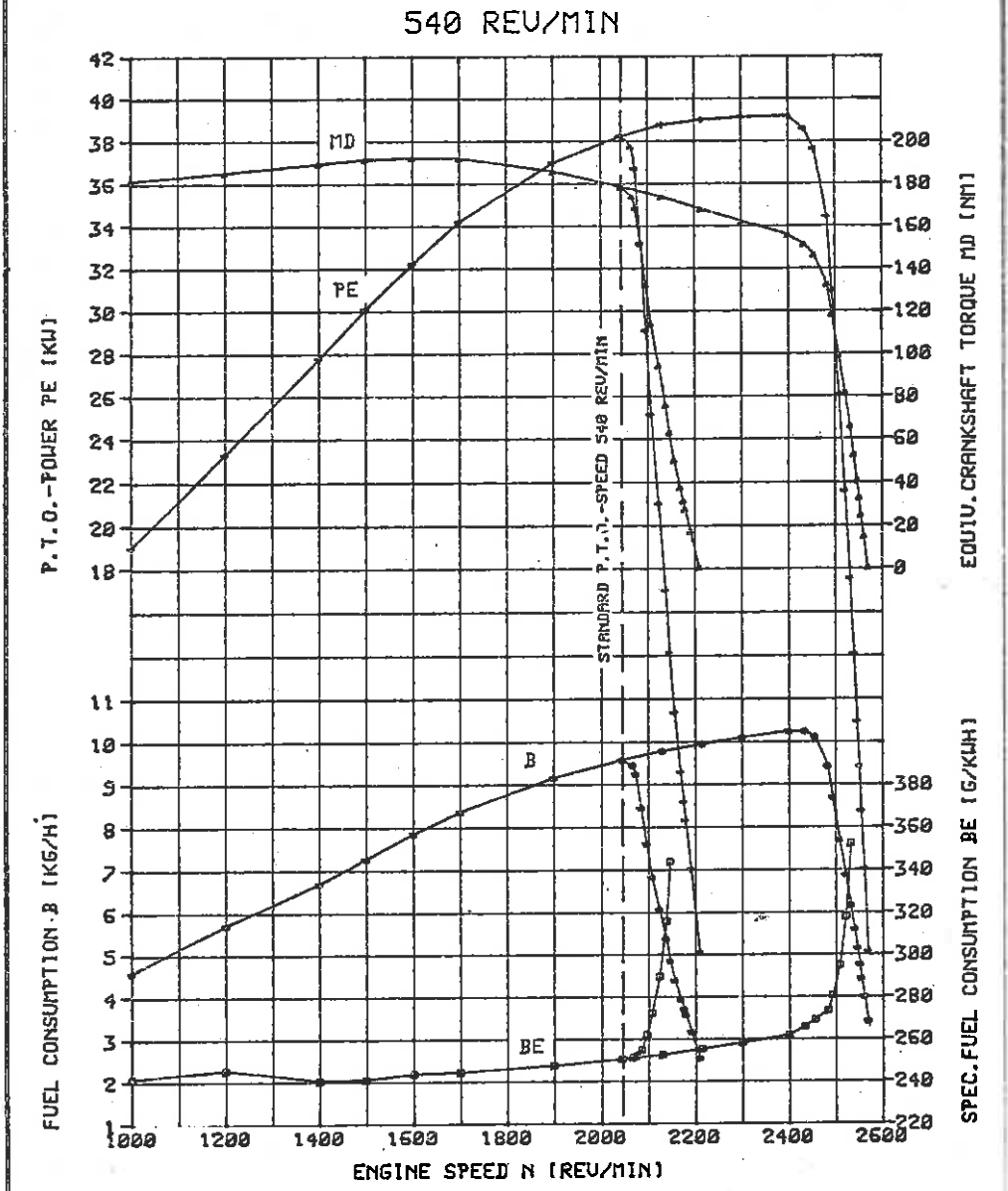
Power	Speed		Fuel consumption		
	engine	p.t.o.	total	specific	specific
kW	rev/min	rev/min	kg/h l/h	g/kWh	kWh/l
PART LOADS Governor hand lever in position giving standard p.t.o. speed at full load					
(i) 85 % of torque at standard p.t.o. speed					
33,17	2086	551	8,46 9,89	255	3,354
(ii) unloaded					
-	2210	584	2,56 2,99	-	-
(iii) 50 % of the load defined in (i)					
17,00	2139	565	5,38 6,29	316,5	2,702
(iv) maximum power at standard p.t.o. speed					
38,23	2044	540	9,59 11,21	250,5	3,411
(v) 25 % of the load defined in (i)					
8,62	2169	573	3,94 4,61	457,5	1,868
(vi) 75 % of the load defined in (i)					
25,15	2108	557	6,85 8,01	272,5	3,139
STANDARD SPECIFIC FUEL CONSUMPTION: 273,5/352,5 - 255/316,5 g/kWh					

No load maximum engine speed: 2570 rev/min
Equivalent crankshaft torque at maximum power: 156 Nm
Maximum equivalent crankshaft torque: 192,5 Nm at 1600 rev/min of engine

Mean atmospheric conditions: temperature: 15°C
pressure: 983 mbar
humidity: 73 %

Maximum temperatures: coolant: 86°C
engine oil: 112°C
fuel: 60°C
air intake: 22°C

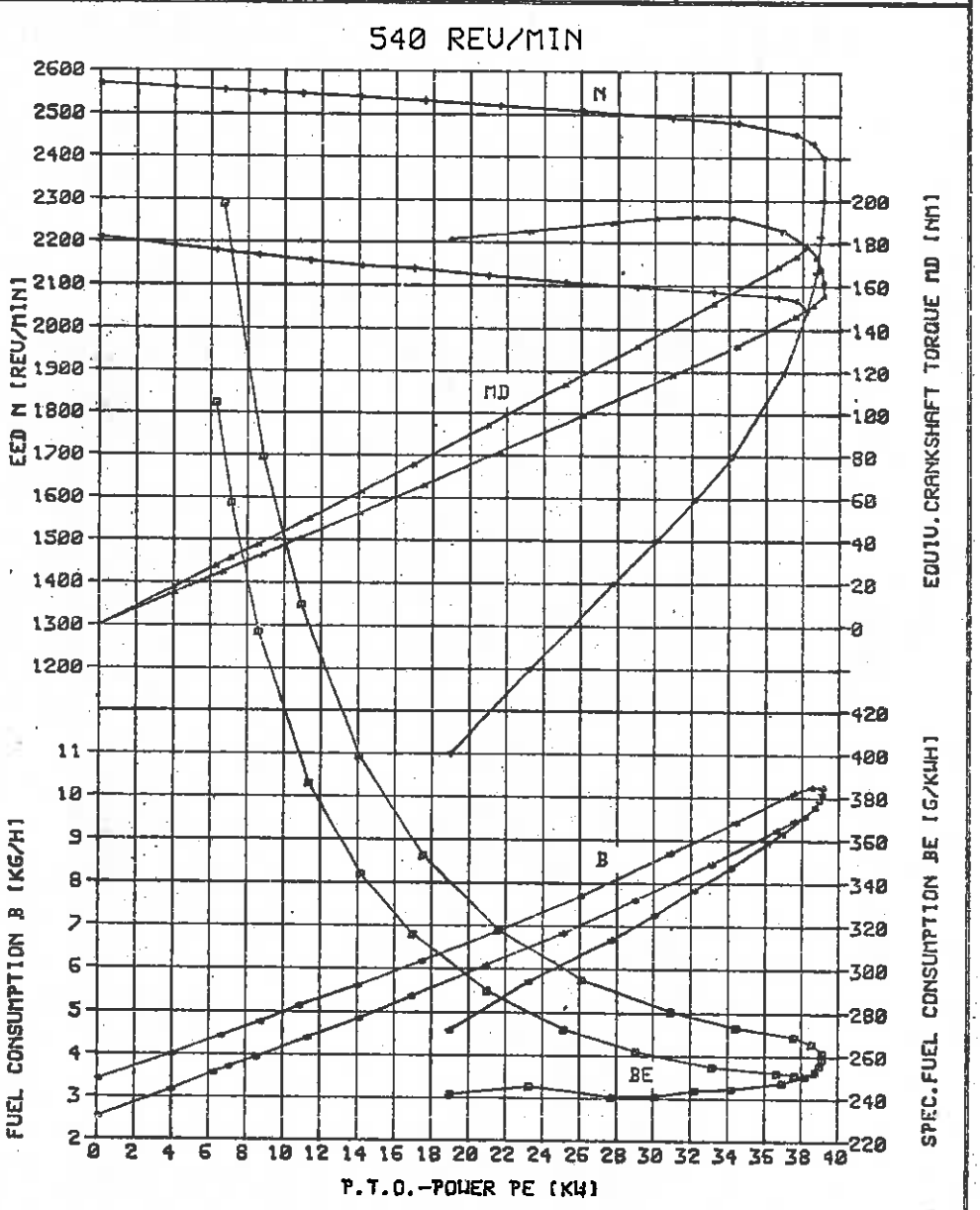
BUNDESVERSUCHS-U. PRUEFUNGSANST. FUER LANDU. MASCHINEN U. GERAETE WIESELBURG/ERLAUF, AUSTRIA PROT.NR.:069/80	P.T.O.-TEST	STEYR DIESELTRAKTOR TYP 337.35 (8070 A) MOT.TYP WD 411.41



ENGINE SER.NR.: 411.41-1008	ATM.PRESSURE : 983 MBAR	FUEL TEMP.: 60 C	SIGNATURE
TRAKTOR SER.NR.: 337.35-1001	AIR TEMPER. : 15 C	D.OF TESTS: 1980-05-21	A. Reitther
FUEL : B.855/15 C	COOLANT TEMP.: 86 C	TEST NO. : 125/ZA 121	
ENGINE OIL : SAE 10W-30	OIL TEMP. : 112 C	CURVES NO.: 1	REITHER

DVR.:B100846-DL003:TKU036.DAT:TKU28-21

BUNDESVERSUCHS-U. PRUEFUNGSANST. FUER LANDW. MASCHINEN U. GERAETE WIESELBURG/ERLAUF, AUSTRIA PROT. NR.: 869/80	P.T.O.-TEST	STEYR DIESELTRAKTOR TYP 337.35 (8070 A) MOT. TYP WD 411.41



ENGINE SER.NR.: 411.41-1088	ATM. PRESSURE : 983 MBAR	FUEL TEMP.: 60 C	SIGNATURE
TRAKTOR SER.NR.: 337.35-1801	AIR TEMPER. : 15 C	D.OF TESTS: 1980-05-21	A. Reitlner
FUEL : 0.835/15 C	COOLANT TEMP.: 86 C	TEST NO. : 125/ZA 121	
ENGINE OIL : SAE 10W-30	OIL TEMP. : 112 C	CURVES NO.: 2	REITHER

DVR.: 0100846-DL803; MKU836. DAT; MKU20-21

2. Drawbar performance

Date of tests: 1980 05 27 to 30
Type of track: Concrete
Height of drawbar above ground: 400 mm ballasted, 380 mm unballasted

Gear No.	Speed	Power	Drawbar pull	Engine speed	Slip of wheels	Fuel consumption		Temperatures			Atmosph. conditions		
						specific	specific	Fuel	Coo-lant	Engine Oil	Tempe-rature	rel.hu-midity	Pres-sure
	km/h	kW	N	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mbar
(i) Maximum power (ballasted) tyre inflation pressure in the front 2,1 bar, in the rear 1,7 bar													
VN1L	1,368	15,13	39805	2461	15	–	–	38	80	98	17	71	986
VS1L	1,672	18,48	39800	2445	15	–	–	40	80	100	18	72	986
VN2L	2,583	28,56	39802	2418	15	2,393	357,5	42	81	103	18	73	986
VS2L	3,327	31,51	34103	2400	10,3	2,630	325	43	81	104	18	72	986
VN3L	4,125	33,05	28846	2402	8	2,763	309,5	44	81	105	18	72	986
VN1S	4,890	33,55	24699	2400	6,8	2,811	304	44	81	106	18	72	986
VS3L	5,160	33,55	23405	2400	6,4	2,806	304,5	44	81	107	18	71	986
VS1S	6,116	33,38	19651	2402	5,2	2,797	305,5	43	80	106	18	70	986
VN4L	7,076	33,02	16804	2398	4,4	2,761	309,5	43	80	105	19	69	986
VS4L	8,802	32,15	13151	2400	3,3	2,688	318	43	80	106	19	68	986

Gear No.	Speed	Power	Drawbar pull	Engine speed	Slip of wheels	Fuel consumption		Temperatures			Atmosph. conditions		
						specific	specific	Fuel	Coo-lant	Engine Oil	Tempe-rature	rel.hu-midity	Pres-sure
	km/h	kW	N	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mbar
(ii) Five-hour-test at 75 % of pull at maximum power													
VS 3L	5,400	26,33	17553	2483	4,5	2,415	354	59	84	115	23	58	998
(iii) Five-hour-test at pull corresponding to 15 % wheelslip in test (i)													
VN2L	2,552	23,25	39846	2423	15	2,376	360	62	85	114	20	64	997
(iv) Maximum power (unballasted) tyre inflation pressure in the front 1,6 bar, in the rear 1,5 bar													
VN2L	2,602	23,31	32249	2453	15	-	-	42	81	103	16	72	985
VS2L	3,177	28,47	32252	2435	15	2,379	359,5	44	81	105	16	72	985
VN3L	3,981	31,00	28034	2402	10,6	2,584	331	44	81	107	17	70	985
VN1S	4,768	32,15	24274	2398	8,5	2,685	318,5	44	82	108	17	70	985
VS3L	5,038	32,35	23120	2400	8	2,705	316	45	82	109	18	69	985
VS1S	5,991	32,71	19651	2400	6,5	2,732	313	45	82	109	18	68	985
VN4L	6,961	32,66	16893	2402	5,3	2,728	313,5	44	82	109	18	69	985
VS4L	8,660	32,45	13488	2398	4,2	2,705	316	44	81	108	18	70	985

Total oil consumption during 10 hours duration of tests (ii) and (iii): 61,1 g/h

3. Turning space and turning circle

Wheel equipment front: SEMPERIT 8,3-24 AS, PR 8
rear: SEMPERIT 12,4-36 AS, PR 6

Track of wheels front: 1514 mm
rear: 1524 mm

Results *)	With brakes		Without brakes	
	right-hand	left-hand	right-hand	left-hand
	m	m	m	m
Radius of turning space	3,61	3,92	4,74	4,88
Radius of turning circle	3,44	3,75	4,57	4,71

*) Four-wheel-drive engaged

4. Location of centre of gravity

	mm
Height above ground	898
Distance forward from the vertical plane containing the axis of the rear wheels	848
Distance from the median plane, left-hand	3

5. Braking

Date of tests: 1979 08 30
Type of track: Concrete
Type of decelerometer: Moto-Meter Nr. 15813 (Kombi-Schreiber)
Mass of ballasted tractor: 3948 kg (with driver)

Cold brakes

		Ballasted	Without ballast
Travelling speed of the tractor	km/h	25	25
(i) Deceleration	m/s^2	8,4	7,3
(ii) Stopping distance	m	3,89	5,17
(iii) Force exerted on the brake pedal	N	500	460
(iv) Force exerted on the brake pedal to achieve a deceleration of 2,5 m/s^2	N	160	180

Brake fade characteristics (hot tests)	Ballasted*	Unballasted
Deceleration hot / deceleration cold x 100	98	112
Stopping distance cold / Stopping distance hot x 100	103	121
Force on pedal, cold / Force on pedal, hot x 100	93	68
Force on pedal, cold / force on pedal, hot to achieve a deceleration of 2,5 m/s^2 x 100	114	106

Efficiency of handbrake:
Satisfactory facing up and down slope of 16 %
pull on handbrake: 147 N

6. Measurement of ambient noise

Date of tests: 1979 09 20
Type of sound level meter: 2203 BRÜEL & KJAER
Type of track: Concrete

Results of tests:
Gear: VS 4 S
Travelling speed before acceleration: 24 km/h
Sound level: 83 dB(A)

7. Noise measurement at the driver's ear level

Date of tests: 1979 09 20
Type of sound level meter and octave filter:
2203 and 1613 BRÜEL & KJAER
Type of track: Concrete

Results of tests (tractor with safety cab): (30 km/h model, as tested)

Gear	Effective travelling speed	Sound level	
		dB(A)	Noise rating
VN 1 L	1,47 km/h	81,5	-
VS 1 L	1,92 km/h	81	-
VN 2 L	2,68 km/h	82,5	-
VS 2 L	3,49 km/h	82,5	-
VN 3 L	4,35 km/h	82	-
VS 3 L	5,24 km/h	82,5	-
VN 1 S	5,01 km/h	81,5	-
VS 1 S	6,18 km/h	83	-
VN 4 L	7,65 km/h	81,5	-
VS 4 L	8,45 km/h	82,5	-
VN 2 S	9,52 km/h	84	-
VS 2 S	12,51 km/h	81,5	-
VN 3 S	14,82 km/h	83,5	-
VS 3 S	18,60 km/h	83	-
VN 4 S	25,48 km/h	84	-
VS 4 S	31,20 km/h	82,5	-

8. Power lift and hydraulic pump performance

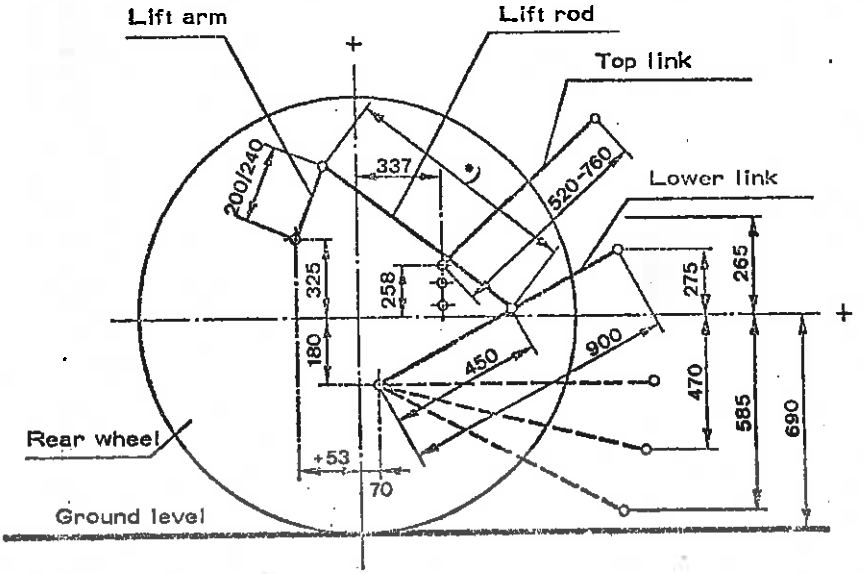
Date and location of tests: 1979 11 07, Wieselburg, Austria
Hydraulic fluid:
Make and type: SHELL Tellus 33, SAE 20 W
Viscosity at 50°C: 40 mm^2/s (40 cSt)
Typ of linkage lock for transport: hydraulically by throttle valve
Opening pressure of the cylinder overpressure relief valve (manufacturer specification): 24,5 MPa (245 bar)

Pump characteristics:

(i) Opening pressure of the relief valve: 18,0 MPa (180 bar)
sustained pressure by the open relief valve: 17,2 MPa (172 bar)

(ii) Pump delivery rate at minimum pressure and rated engine speed: 35,1 l/min

(iii) Pump delivery rate: 34,4 l/min
delivery pressure: 17,2 MPa (172 bar
power: 9,86 kW



*) basis adjustment: both lift rods 534 mm
left lift rod: from 534 mm to 621 mm adjustable
right lift rod: from 500 mm to 621 mm adjustable

Linkage geometry when connected to the standard frame

		Maximum mechanical advantage	Minimum mechanical advantage
Projected length in side view			
Lower links	mm	900	900
Lift arms	mm	200	240
Lift rods	mm	534	534
Top link	mm	622	622
Distance of lift rod connection point from pivot point of lower link	mm	450	450
The following dimensions are given relative to the rear wheel centre line, situated 690 mm*) above the ground level			
Lower link pivot point	mm	70 behind 180 below	70 behind 180 below
Top link pivot point	mm	337 behind 258 above	337 behind 258 above
Lift arm pivot point	mm	53 behind 325 above	53 behind 325 above
Maximum und minimum height of lower link hitch points	mm	275 above 240 below	265 above 350 below
Height of lower link hitch points locked in transport position	mm	from 250 above to 240 below	from 265 above to 350 below

*) Index radius

Performance of power lift

Lifting heights in relation to a horizontal line through the lower link pivoting point mm		-170	-140	-100	-55	-35	0	+50	+100	+200	+300	+400	+430	+520	+540
Lifting force at the hitch-points kN (Values for the pressure at maximum hydraulic power, calculated from measurements made at maximum pressure)	max.mech. advantage				26,58	25,90	25,66	25,21	24,33	24,33	23,89	23,64	23,45		
	min. mech. advantage	23,74	22,27	21,83	21,73	21,70	21,68	21,48	21,28	20,45	20,11	19,91	19,62		
	Maximum force exerted throughout whole range: 23,45/19,62 kN														
	Oil pressure: 17,2 MPa (172 bar)														
Lifting force at the frame kN (Values for the pressure at maximum hydraulic power, calculated from measurements made at maximum pressure)	max.mech. advantage					25,89	24,38	23,49	22,66	21,24	19,72	18,00	17,46	15,79	15,31
	min. mech. advantage		23,59	21,48	20,94	20,65	20,26	19,62	10,03	17,66	16,28	15,06	14,72	13,74	
	Maximum force exerted throughout whole range: 15,31/13,74 kN														
	Oil pressure: 17,2 MPa (172 bar)														

OPTIONAL TEST

9. Main power take-off performance

Date and location of tests: 1980 05 21, Wieselburg, Austria
Type of dynamometer: SCHENK-eddy-current brake - W 780

Main test on: ISO R 500, Type 2 (DIN 9611) - 1000 rev/min

Power	Speed		Fuel consumption		
	engine	p.t.o.	total	specific	specific
kW	rev/min	rev/min	kg/h l/h	g/kWh	kWh/l
MAXIMUM POWER					
Maximum power - 2 hours test					
40,00	2400	1127	10,26 12,00	256,5	3,332
Standard p.t.o. speed					
39,60	2130	1000	9,82 11,48	248	3,447
The speed recommended by the manufacturer for drawbar work					
40,00	2400	1127	10,26 12,00	256,5	3,332
PART LOADS Governor hand lever in position giving maximum power					
(i) 85 % of torque at maximum power					
35,18	2481	1165	9,36 10,94	266	3,214
(ii) unloaded					
-	2573	1208	3,35 3,92	-	-
(iii) 50 % of the load defined in (i)					
17,95	2533	1189	6,14 7,18	342	2,499
(iv) maximum power					
40,00	2400	1127	10,26 12,00	256,5	3,332
(v) 25 % of the load defined in (i)					
9,05	2552	1198	4,78 5,59	528,5	1,618
(vi) 75 % of the load defined in (i)					
26,68	2509	1178	7,66 8,96	287	2,978

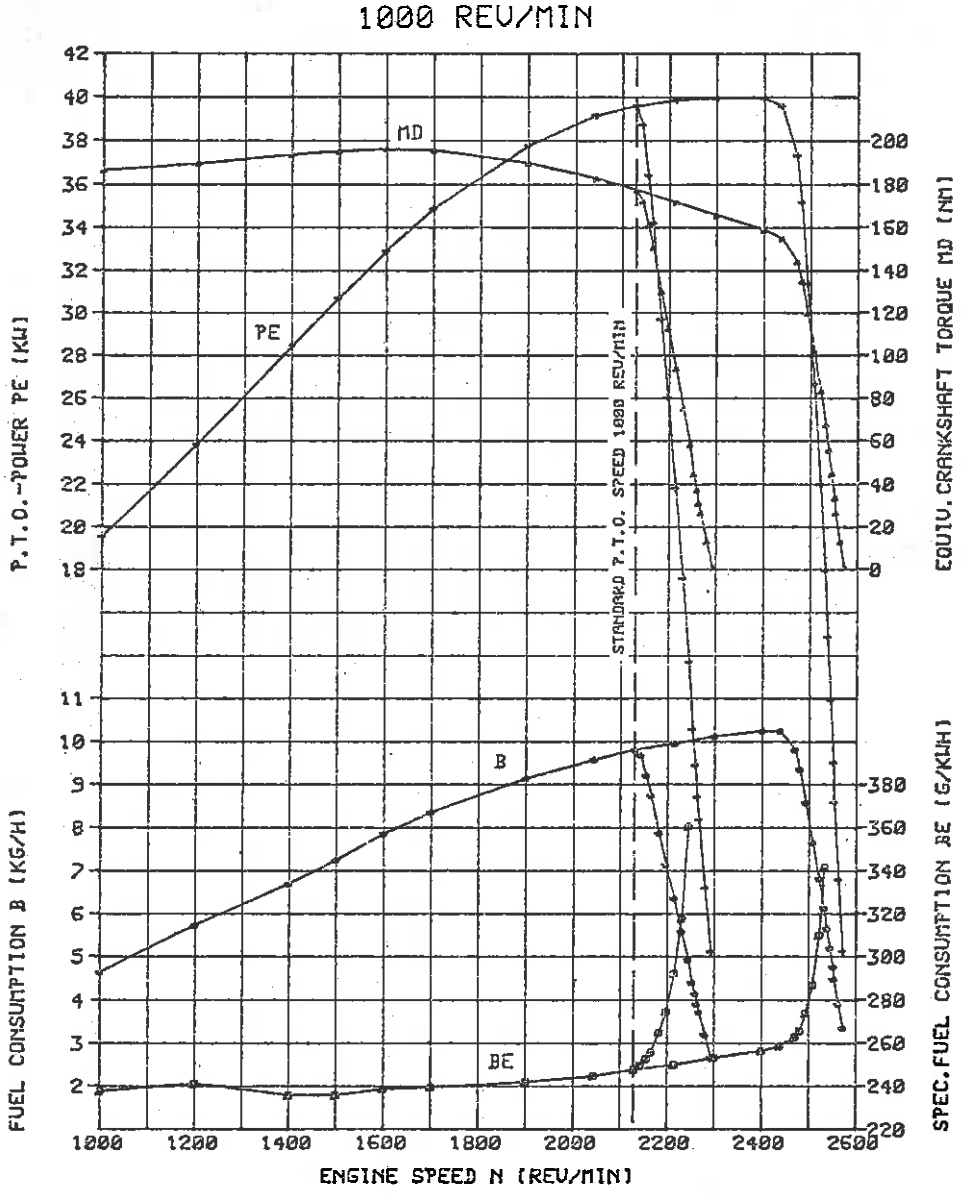
Power	Speed		Fuel consumption		
	engine	p.t.o.	total	specific	specific
kW	rev/min	rev/min	kg/h l/h	g/kWh	kWh/l
PART LOADS Governor hand lever in position giving standard p.t.o. speed at full load					
(i) 85 % of torque at standard p.t.o. speed					
34,22	2166	1017	8,76 10,24	256	3,341
(ii) unloaded					
-	2294	1077	2,68 3,13	-	-
(iii) 50 % of the load defined in (i)					
17,61	2232	1048	5,60 6,55	318	2,690
(iv) maximum power at standard p.t.o. speed					
39,60	2130	1000	9,82 11,48	248	3,447
(v) 25 % of the load defined in (i)					
8,91	2260	1061	4,16 4,87	467	1,829
(vi) 75 % of the load defined in (i)					
26,06	2198	1032	7,15 8,37	274,5	3,114
STANDARD SPECIFIC FUEL CONSUMPTION: 266/342 - 256/318 g/kWh					

No load maximum engine speed: 2573 rev/min
Equivalent crankshaft torque
at maximum power: 159,2 Nm
Maximum equivalent crankshaft torque: 196,3 Nm at 1600 rev/min of engine

Mean atmospheric conditions: temperature: 15°C
pressure: 983 mbar
humidity: 75 %

Maximum temperatures: coolant: 86°C
engine oil: 113°C
fuel: 61°C
air intake: 22°C

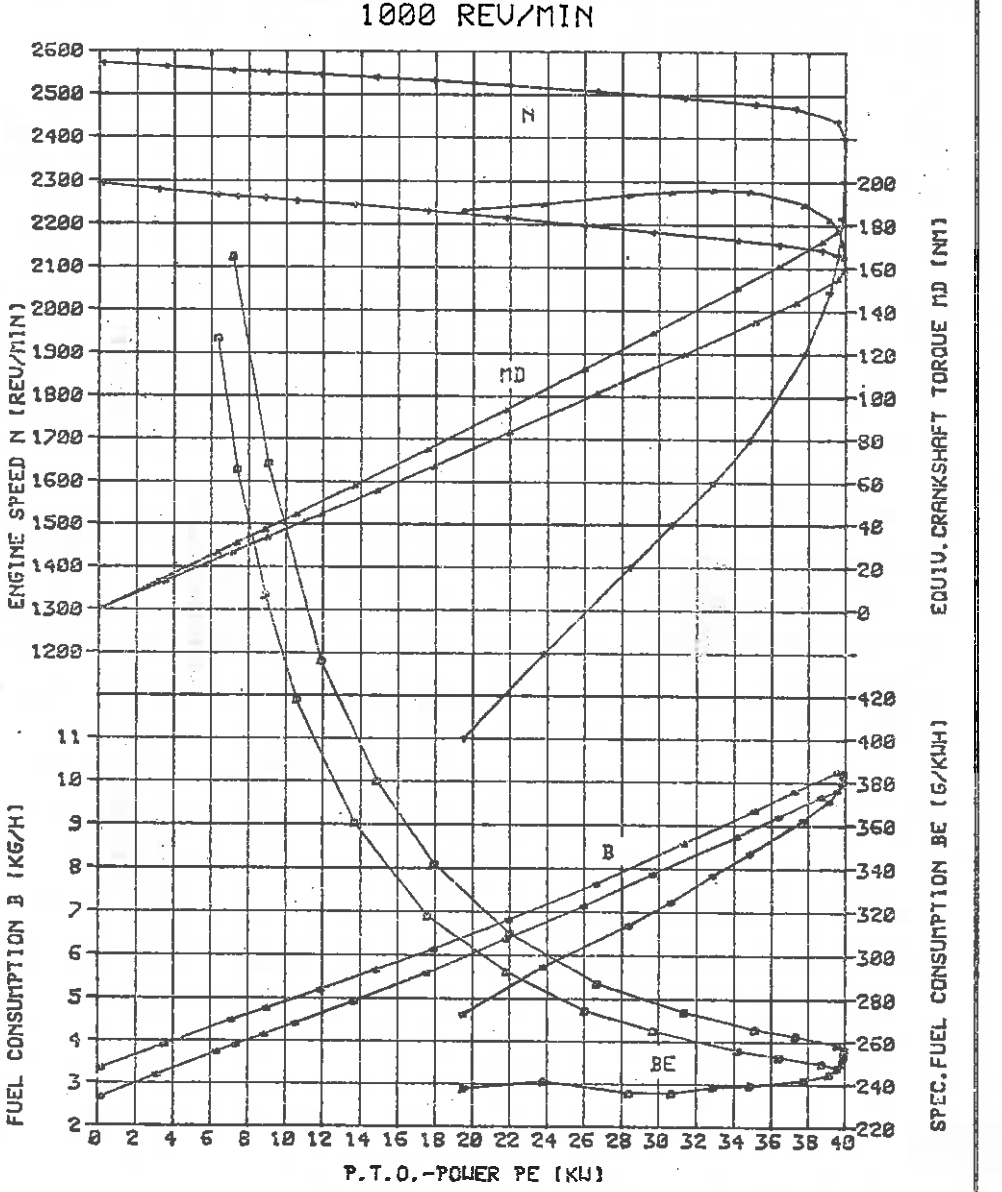
BUNDESVERSUCHS-U. PRUEFUNGSANST. FUER LANDW. MASCHINEN U. GERAETE WIESELBURG/ERLAUF, AUSTRIA PROT. NR.: 069/80	P.T.O.-TEST	STEYR DIESELTRAKTOR TYP 337.35 (8070 A) MOT. TYP WD 411.41



ENGINE SER.NR.: 411.41-1000	ATM. PRESSURE : 983 MBAR	FUEL TEMP.: 61 C	SIGNATURE
TRAKTOR SER.NR.: 337.35-1001	AIR TEMPER. : 15 C	D.OF TESTS: 1980-05-21	A. Reither
FUEL : 0.855/15 C	COOLANT TEMP.: 86 C	TEST NO. : 125/ZA 121	
ENGINE OIL : SAE 10W-30	OIL TEMP. : 113 C	CURVES NO.: 3	REITHER

DOR.: 0106846-DL003; MKU036. DAT; MKU26-22

BUNDESVERSUCHS-U. PRUEFUNGSANST. FUER LAND.MASCHINEN U. GERAETE WIESELBURG/ERLAUF, AUSTRIA PROT.NR.: 069/89	P.T.O.-TEST	STEYR DIESELTRAKTOR TYP 337.35 (8070 A) MOT.TYP WD 411.41



ENGINE SER.NR.: 411.41-1200	ATM.PRESSURE : 983 MBAR	FUEL TEMP.: 61 C	SIGNATURE
TRAKTOR SER.NR.: 337.35-1801	AIR TEMPER. : 15 C	D.OF TESTS: 1988-05-21	A. Reitlner
FUEL : B.855/15 C	COOLANT TEMP.: 86 C	TEST NO. : 125/ZA 121	
ENGINE OIL : SAE 10W-30	OIL TEMP. : 113 C	CURVES NO.: 4	REITHER

DVR.:0100845-DL003.PKW836.DAT;PRU23-22

OPTIONAL TEST

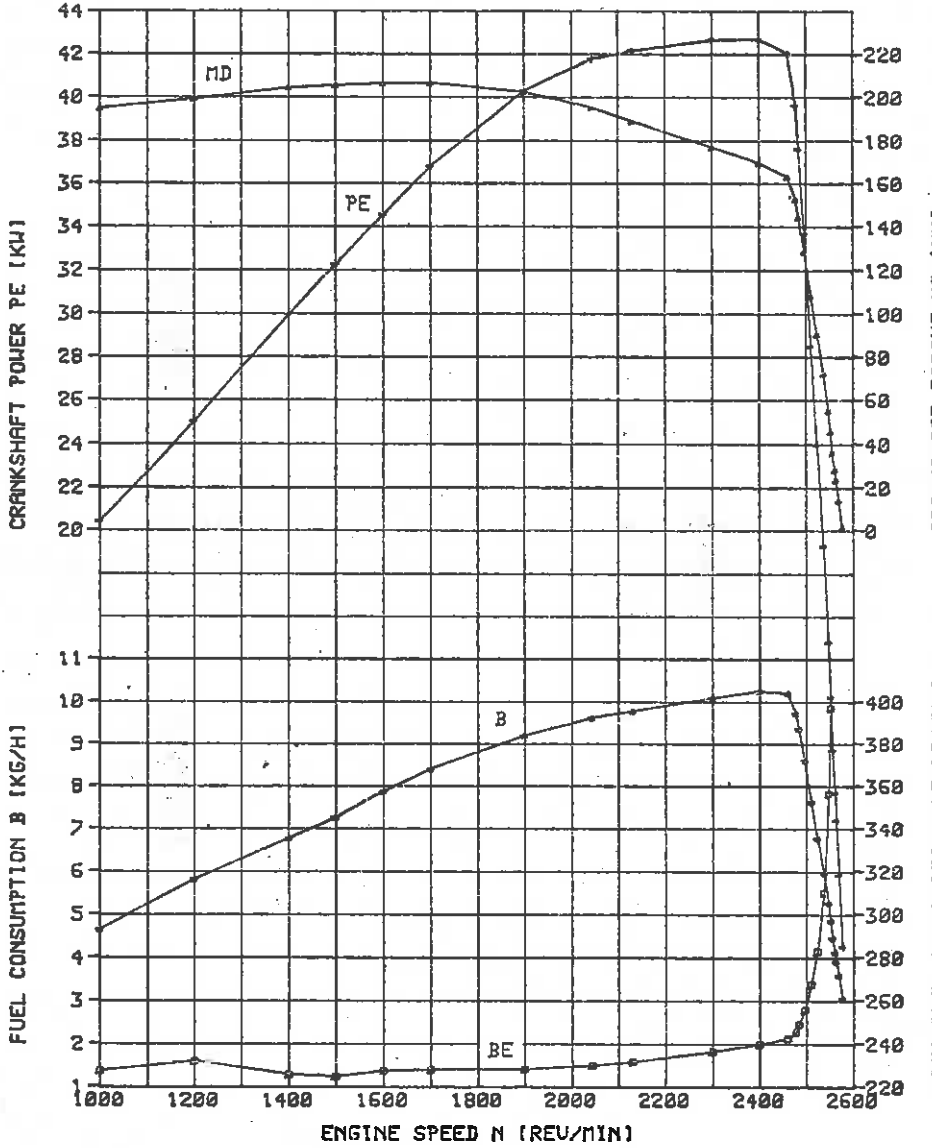
9. Engine performance

Date and location of test: 1980 05 12, Wieselburg/Austria
Type of dynamometer: SCHENK-eddy-current brake - W 150

Power	Engine speed	Fuel consumption		
		total	specific	specific
kW	rev/min	kg/h (l/h)	g/kWh	kWh/l
Maximum power - 2 hours test				
42,72	2400	10,25 11,99	240	3,562
Standard p.t.o. speed (1000 /540 rev/min)				
42,17	2130	9,78 11,44	232	3,685
41,60	2044	9,62 11,24	230	3,716
The speed recommended by the manufacturer for drawbar work				
42,72	2400	10,25 11,99	240	3,562
Part loads				
(i) 85 % of torque at maximum power				
37,63	2484	9,37 10,96	249	3,433
(ii) unloaded				
-	2578	3,05 3,57	-	-
(iii) 50 % of the load defined in (i)				
19,28	2537	5,98 6,99	310	2,757
(iv) maximum power				
42,72	2400	10,25 11,99	240	3,562
(v) 25 % of the load defined in (i)				
9,71	2556	4,47 5,23	460	1,858
(vi) 75 % of the load defined in (i)				
28,50	2511	7,63 8,91	267,5	3,195

Optimum fuel consumption: 225 g/kWh at 30 kW and 1500 rev/min
No load maximum engine speed: 2578 rev/min
Torque at maximum power: 170 Nm
Maximum torque: 206,7 Nm at 1700 rev/min of engine
Mean atmospheric conditions: temperature: 15°C
pressure: 996 mbar
relative humidity: 59 %
Maximum temperatures: coolant: 87°C
engine oil: 107°C
fuel: 61°C
engine air intake: 21°C

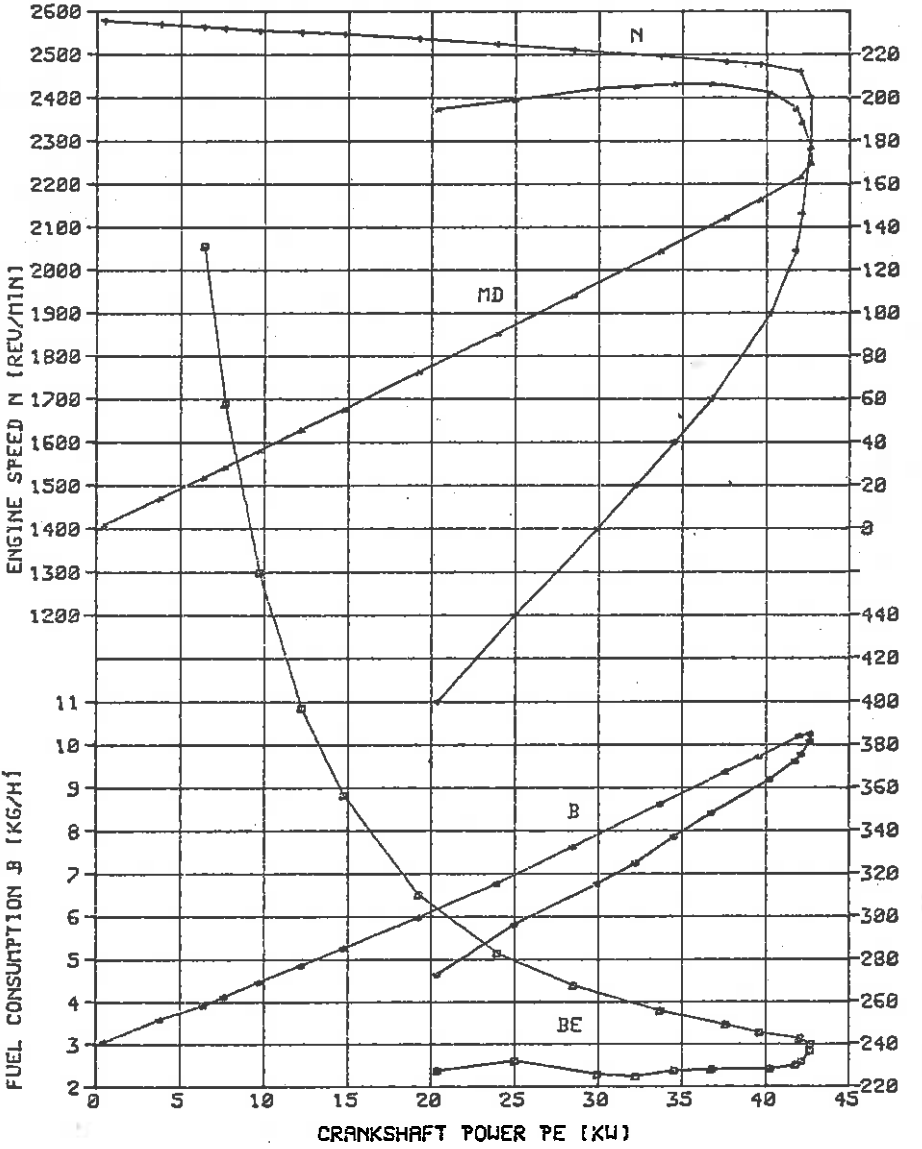
BUNDESVERSUCHS-U. PRUEFUNGSANST. FUER LANDW. MASCHINEN U. GERAETE WIESELBURG/ERLAUF, AUSTRIA PROT.NR.: 069/80	ENGINE-TEST	STEYR DIESELTRAKTOR TYP 337.35 (8070 A) MOT.TYP WD 411.41



ENGINE SER.NR.: 411.41-1000	ATM.PRESSURE : 996 MBAR	FUEL TEMP.: 61 C	SIGNATURE
TRAKTOR SER.NR.: 337.35-1001	AIR TEMPER. : 15 C	D.OF TESTS: 1980-05-12	A. Reitther
FUEL : B.855/15 C	COOLANT TEMP.: 87 C	TEST NO. : 125/M173	
ENGINE OIL : SAE 10W-30	OIL TEMP. : 107 C	CURVES NO.: 5	REITHER

DOK.:0100046-DL003.NKU835.DAT;NKU2B-KW

BUNDESVERSUCHS-U. PRUEFUNGSANST. FUER LANDU. MASCHINEN U. GERAETE UIESELBURG/ERLAUF, AUSTRIA PROT.NR.:069/80	ENGINE-TEST	STEYR DIESELTRAKTOR TYP 337.35 (8070 A) MOT.TYP WD 411.41



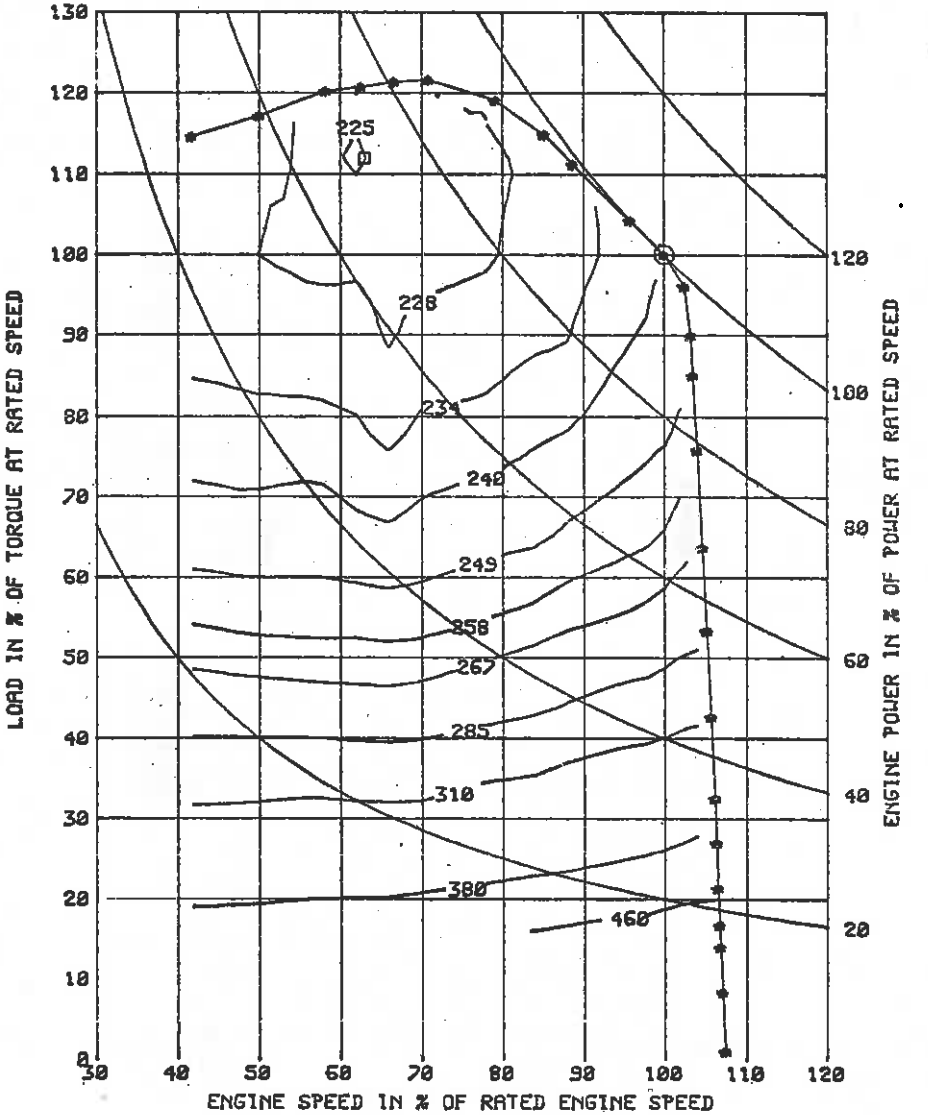
ENGINE SER.NR.: 411.41-1000	ATM.PRESSURE : 996 MBAR	FUEL TEMP.: 61 C	SIGNATURE
TRAKTOR SER.NR.: 337.35-1001	AIR TEMPER. : 15 C	D.OF TESTS: 1980-05-12	A. Reither
FUEL : 0.855/15 C	COOLANT TEMP.: 87 C	TEST NO. : 125/M173	
ENGINE OIL : SAE 10W-30	OIL TEMP. : 107 C	CURVES NO.: 6	REITHER

DUR.:0100846-DL003.MKU036.DAT:MKU20-RU

BUNDESVERSUCHS-U. PRUEFUNGSANST. FUER LAND.U. MASCHINEN U. GERAETE WIESELBURG/ERLAUF, AUSTRIA PROT.NR.: 069/80	ENGINE PERFORMANCE CHARACTERISTICS	STEYR DIESELTRAKTOR TYP 337.35 (8070 A) MOT.TYP WD 411.41

□ ....MIN.FUEL CONS. 224.70 G/KWH AT N = 1512. REV/MIN, MD = 190.37 NM, P = 30.1 KW

⊕ ....N = 2400. REV/MIN, MD = 170. NM, P = 42.7 KW



ENGINE SER.NR.: 411.41-1008	ATM.PRESSURE : 996 MBAR	FUEL TEMP.: 61 C	SIGNATURE
TRAKTOR SER.NR.: 337.35-1001	AIR TEMPER. : 15 C	D.OF TESTS: 1980-05-12	A. Reitlner
FUEL : 0.855/15 C	COOLANT TEMP.: 87 C	TEST NO. : 125/M173	
ENGINE OIL : SAE 10W-30	OIL TEMP. : 107 C	CURVES NO.: 7	REITHER

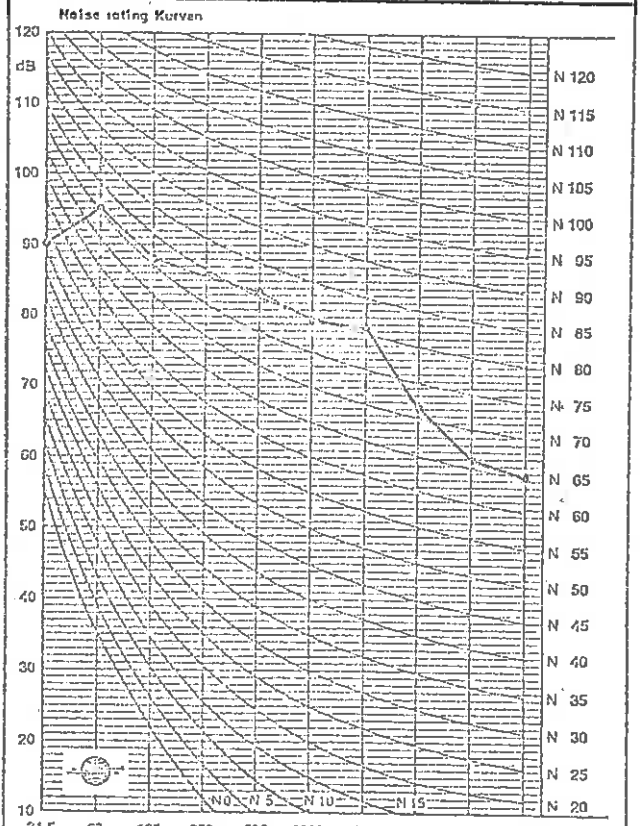
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ANNEX

Out of the OECD-Code under responsibility of the Austrian Testing Station

1. OCTAVE ANALYSIS OF NOISE AT THE DRIVERS EAR LEVEL
(to page 21, chapter 7)

Bundesversuchs-u.Prüfungsanst. f.Landw.Maschinen u.Geräte Wieselburg / Austria	Octave analysis of noise at the drivers ear level	Dieseltractor STEYR 337.35 (STEYR 8070a)



Gear: VN 4 L
Travelling speed: 7,5 km/h

ANNEX

2. REDUCTION OF POWER DATA TO STANDARD CONDITIONS

According to:

Austrian Standard Ö-Norm V - 5003
German Standard DIN 70 020 Teil 6

$$P_{RED} = P_{OECD} \cdot k; \quad \text{where } k = \frac{1013}{B} \cdot \sqrt{\frac{273 + t}{293}}$$

A) MAIN POWER TAKE OFF PERFORMANCE (page 14 and 25)

Test conditions: Intake air temperature $t = 15^{\circ}C$
Atmospheric pressure $B = 983$ bar
Resulting reduction coefficient: $k = 1,0217$

	P_{OECD}	P_{RED}
MAXIMUM POWER 540 rev/min	39,18 kW (53,28 mPH)	40,03 kW (54,44 mPH)
MAXIMUM POWER 1000 rev/min	40,00 kW (54,40 mPH)	40,87 kW (55,58 mPH)

B) ENGINE PERFORMANCE (page 30)

Test conditions: Intake air temperature $t = 15^{\circ}C$
Atmospheric pressure $B = 996$ mbar
Resulting reduction coefficient: $k = 1,0083$

	P_{OECD}	P_{RED}
MAXIMUM POWER	42,72 kW (58,10 mPH)	43,08 kW (58,58 mPH)