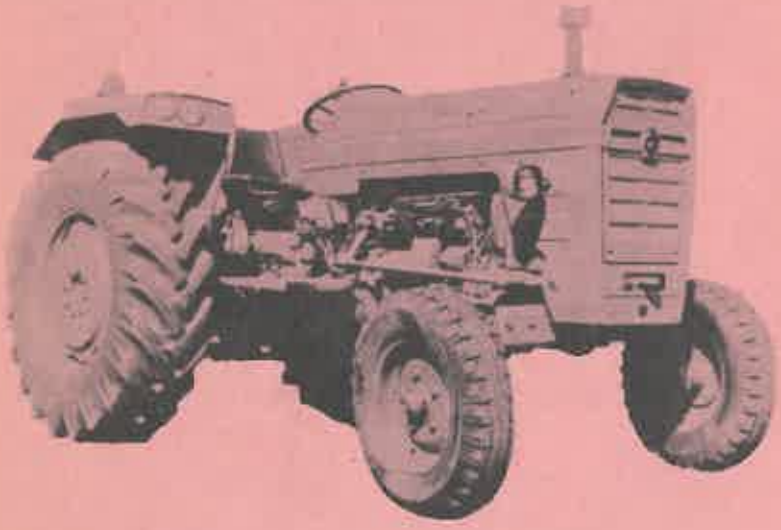
Institut za mehanizaciju poljoprivrede - Zemun

O.E.C.D. Report № 698
Printed: November 1980

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



Agricultural Tractor IMT — 560

Manufactured by: IMT — Industrija Mašina i Traktora
Novi Beograd — Yugoslavija

Date of test: June — July 1980

This Bulletin is based on engineering tests in accordance with the O.E.C.D. STANDARD—CODE for the Official Testing of Agricultural Tractors.

It does not contain an evaluation of the performance of the tractor on practical work.

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

Date of Approval: October 31st, 1980

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Tractor manufacturer:	IMT - Industrija Mašina i Traktora Novi Beograd, Yugoslavia
Submited for test by:	The manufacturer
Selected by:	Representatives of IMP
Place of running-in:	Laboratory of IMP
Duration of running-in:	cca 60 hours

SPECIFICATOIN OF TRACTOR

TRACTOR

Make:	IMT
Model:	IMT - 560
Type:	Standard - unit construction four wheels, rear wheels driven
Serial N°:	001.000091

ENGINE

Make:	IMR - Industrija Motora Rakovica
Model:	M 34/T
Type:	Four stroke, water cooled diesel, indirect injection
Serial N°:	Y 772Ole9763
Cylinders:	4, vertical, in-line, bore 91,4mm, stroke 127mm, displacement 3330 cm^3, compression ratio 17,4:1, overhead valves, replaceable dry cylinder liners
Fuel system:	IPH membrane type feed pump with hand primer, CAV - DONIT two paper element fuel filters on pressure side of feed pump, first filter with sediment bowl; fuel tank capacity 110 l; CAV - IPH distributor type DPA 3248 F741 injection pump, Serial N° PX 336, manufacturer's production setting 50 mm^3 at 2250 rev/min engine speed, injection timing 20° before T.D.C.; CAV - IPH injector nozzles, model YAH, injection pressure 118 bar (120 kp/cm^2)

Governor:	CAV - IPM, mechanical, all range, incorporated in fuel injection pump, governed range of engine speed 475 to 2400 rev/min, rated engine speed 2250 rev/min
Air cleaner:	Main IKARUS with oil bath, oil capacity 0,6 l, centrifugal pre-cleaner IKARUS
Lubrication system:	Forced feed from gear pump with strainer in sump, full flow replaceable paper element filter; total oil capacity 6,5 l, recommended oil quality MIL-L-2104C; recommended oil viscosities: winter SAE 20 summer SAE 30 tropics SAE 40 oil and filter change interval 200 h
Cooling system:	Water cooling with impeller pump; pressurized system set to 0,4 bar overpressure; fan with 6 blades, 406 mm diameter; pump delivery 124 l/min of water, fan delivery 2,13 m^3/sec of air, both at 2250 engine rev/min; water capacity 12 l; temperature control by thermostat
Starting system:	Electrical, ISKRA solenoid - engaged starter motor OSN 1/N - 12/2,5/10-1 2,5 kW, heating plug in intake manifold as aid for cold starting
Eshaust:	Vertical, above bannet, on left hand side of engine, mouth 2210 mm above ground
Electrical system:	12 Volt, negative earth; ISKRA generator ADJ 0101-12V 15A; one lead acid battery 135 Ah at 20-hour rating

TRANSMISSION

Clutch:	KROM - Novi Beograd; dry, dual friction disc type double acting clutch, tractor drive disc dia 301 mm, p.t.o. shaft drive disc dia 250 mm, mechanically pedal operated
Gearbox:	Own make; mechanical with sliding gears, 3 forward and 1 reverse gear and low and high speed selector of planetary type; N° of speeds (totally): 6 forward 2 reverse
Rear axle and final drive:	Own make; Bevel gear drive with crown wheel and pinion; bevel gear type differential with lock, pedal operated, self disengaging; planetary type final drives
Oil capacities:	Gearbox (with hydraulic power lift) and rear axle 35,5 l final drives 2x1 l
Oil changing period:	800 hours for all gears
Recommended oil qualities:	Gearbox and differential: hydraulictransmission oil JOHN DEERE J 14 B, MASSEY FERGUSON M-1135, IHC HY-TRAN B-6 or similar final drive hypoid oil SAE 90 according to MIL-L-2105 B

Power take-off

Main P.T.O.:	Semi-independent p.t.o.; at rear of tractor in the median plane; driven through the second disc of the double acting clutch, mechanically pedal operated;

	height above ground 513 mm; dimensions 29 x 34,9 x 8,7 mm, 6 splines acc. to JUS M.L1-6o1, DIN 9611 Form 1, ASAE S.2o3.7
Proportional p.t.o.	Speed at rated engine speed (225o rev/min) 72o rev/min; standard p.t.o. speed 54o rev/min at 1688 engine rev/min; direction of rotation clockwise, viewed from tractor rear
Ground p.t.o.	Distance travelled for one revolution of p.t.o. o,483 m (calculated with rolling radius of driving wheels 674 mm)m number of p.t.o. revolutions for one revolution of driving wheel 8,77; direction of rotation clockwise, facing driving end of p.t.o. and with tractor in forward gear

Total ratios and speeds

Gear	Total ratio engine: driving wheel	Nominal travelling speed at rated engine speed km/h	Nominal travelling speed at standard p.t.o. speed 54o rev/min km/h
Forward speeds			
1 low	221,1o	2,58	1,94
2 low	147,39	3,88	2,91
3 low	8o,4o	7,11	5,33
1 high	55,27	1o,34	7,77
2 high	36,85	15,51	11,63
3 high	2o,1o	28,44	21,33
Reverse speeds			
low	162,34	3,52	2,64
high	4o,58	14,1o	1o,56

Calculated with driving wheel rolling radius 674 mm, given in the tyre manufacturer`s specification

Belt pulley:	Available optionally; located at rear of tractor, connected to p.t.o. shaft; width 165 mm, diameter 228,6 mm; speeds at rated engine speed (2250 rev/min) linear 962 m/min rotational 1340 rev/min engine speed at standard belt pulley speed (945 m/min) 2210 rev/min; direction of rotation clockwise viewed face of pulley
Power lift:	Own make;
Hydraulic system:	Four cylinder piston pump of boxer type with 29,4 cm^3/rev delivery, located in central housing, driven by p.t.o. shaft front end, with control valve at suction side; control valve for lifting and sinking, draught control, position control, both stepless mixable; opening pressure of relief valve 170 bar, sustained pressure by the opened relief valve 185-190 bar; single acting ram with 83 mm bore, 121 mm stroke; 2 external oil tappings, single or double acting at rear of tractor available optionally; hydraulic oil tank in common with gearbox, oil capacity 35,5 l, max 5 l may be taken off trough oil tappings when tractor is mooving, 10 l when tractor is stationary; strainer in hydraulic pump suction line, every 500 h maintained by washing
Implement linkage:	Three point linkage category II; lift rods adjustable from 425 to 500 mm lifting range above ground with short lift rods from 340 to 990 mm long lift rods from 140 to 845 mm (rear wheels static radius 670 mm)

Pull attachment

Swinging drawbar: Height above ground 377 and 467 mm, adjustable by turning drawbar;
diameter of clevis hole 31 mm;
horizontal distance of clevis hole centre to:
rear axle centre 616 and 8oo mm
p.t.o. shaft end 166 and 35o mm
swingable about 16o mm to either side with fixing points in the median position and 75 and 14o mm to both sides;
pivot point 81 mm in front of rear axle;

Holed bar: Fitted on the clevis of the lower links;
length between the ball joints 66o mm;
thickness of the bar 25,4 mm;
one hole in the median position and 4 holes on either side in 54 mm steps;
all holes 2o mm diameter;
height above ground adjustable by power lift within the range from 22o to 9oo mm continuosly;
mechanically lockable in all positions by means of two supporting bare with adjustable length;
distance of centre hole with lower links in horizontal position:
from rear axle:
horizontal 87o mm
vertical - 18o mm
from p.t.o. shaft end
horizontal 42o mm
vertical - 53 mm

Trailer hitch: Automatically acting by means of power lift;
height above ground 272 mm in working position;
distance of hitch centre:
from rear axle:
horizontal 389,5 mm
vertical - 398 mm
from p.t.o. shaft end
horizontal 6o,5 mm
vertical - 271 mm
Maximum admissible vertical load 15oo daN

diameter of the coupling pin 3o mm;

Towing hitch: Fixed;
height above ground 747 mm;
distance of the hitch centre:
from the rear axle
horizontal 6o8 mm
vertical 77 mm
from the p.t.o. shaft
horizontal 358 mm
vertical 2o4 mm
diameter of the coupling pin 3o mm

NOTE:

1° All pull attachment heights are given for the static radius of rear wheels 67o mm;

2° Swinging drawbar only is compulsory equipment, holed bar, trailer hitch and towing hitch are available optionally.

Steering: Own make;
worm with travelling balls;
manual control with arm and connecting rod

Brakes:

Service brake: FAK - Losnica;
hydraulically acting disc type brake, located in the rear axle housing before final drive;
operated with 2 pedals coupled by a latch;

Steering brake: Divided pedals of service brake, for normal use locked together;

Parking brake: Own make;
band brake acting to the shaft before differential;
manually operated by a hand lever;

Trailer brake: Optional equipment, fitted on the tested tractor;
make PPT;
single line air brake, operated by pedal mounted valve;

	compressor with 75 mm bore, 28 mm stroke, driven by the engine at 234o rev/min speed by rated engine speed (225o rev/min); compressor delivery o,29 m^3/min (at atmospheric pressure) at rated engine speed; pressure control valve with filter and coupling for tyre pressurizing, operating within 4,8-5,3 bar; compressed air tank with 2o l capacity; standardized coupling head
Wheels	
Steering wheels:	2 pneumatics in front 7,5o-16 6 ply diagonal type tyre casing; maximum permissible load per tyre 71o kg at 2,5 bar inflation pressure and 3o km/h; track width adjustable from 13oo to 18oo mm in 1oo mm steps; rims 5,5F x 16
Driving wheels:	2 pneumatics at rear 16,9-28, 6 ply diagonal type tyre casing; maximum permissible load per tyre 171o kg at 1,1 bar inflation pressure and 3o km/h; cast iron wheel discs, track width adjustable from 15oo to 21oo mm in four steps by tirning of wheel discs; rims W 12L x 28
Wheel base:	22oo mm
Seat:	Own make; upholstered seat with back rest; adjustable spring (6o to 12o kg) with shock absorber; height of driver's platform above ground 725 mm, height of ballasted seat oca 14oo mm; for and aft adjustable about 125 mm
Number of grease points:	with grease 15 with oil 1o

Lighting equipment: Electrical, 12 Volt, negative earth

	Dimensions mm	Height above ground to centre mm	Distance from outside edge of tractor to centre mm 1)
Head lights	ø 11o	1o6o	535
Side lights			
front	ø 75	146o	155
rear	4o x 55	149o	22o
Rear lights			
position	6o x 55	149o	275
stop	4o x 55	149o	325
Reflectors			
front 2)	ø 85	146o	285
rear 3)	ø 135	166o	44o

1) with rear wheel's track width 15oo mm
2) a pair of reflectors on the fender's front panel
3) only one reflector on the rear edge of right hand fender
4) unrestricted beam angle of Head lights in plan view 32°

CONDITIONS DURING TEST

Weights Ready for use as tested

		without driver	with driver
Without ballast:	front	9oo kg	91o kg
	rear	157o kg	1635 kg
	total	247o kg	2545 kg
With ballast:	front	121o kg	122o kg
	rear	216o kg	2225 kg
	total	337o kg	3445 kg

Ballast: front 8 weights 3o kg each and weights carrier 2o kg 26o kg

rear 4 weights 5o kg each 2oo kg

water in the tyres 44o kg

Track setting

Front axle 14oo mm

Rear axle 15oo mm

Dimensions

Total length: 3975 mm without ballast

4295 mm with ballast

Total width: maximum 251o mm with rear wheel's track setting 21oo mm, with and without ballast

Total height: 181o mm to the top of steering wheel

221e mm to the top of exhoust pipe

Ground clearance: 434 mm in tractor's median plane

FUELS AND LUBRICANTS USED IN TESTS

Fuel:	INA Diesel-fuel D_2 in all tests
	specific gravity at 15 °C 0,827 kg/l
	cetane number 58
Engine oil:	Galax Super (35) SAE 3o (11 cSt at 98,9 °C)
Transmission and power lift oil:	Galax Traktol HT (8,7 cSt at 98,9 °C)
Final drive oil:	HIPOL 9o (17 cSt at 98,9 °C)

COMPULSORY TESTS

(1) MAIN POWER TAKE-OFF PERFORMANCE

Date and location of tests: 26.June 1980
Institut for Agricultural Mechanisation - Zemun

Type of dynamometer: Hydraulic brake SCHENCK U1-30

Power kW (hp)	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 (g/hph)	Specific energy kWh/l (hph/l)
MAXIMUM POWER						
At 2-hour test						
38,04 (51,70)	2250	720	14,03	11,56	304 (224)	2,71 (3,68)
At standard p.t.o. speed (540 rev/min)						
32,19 (43,74)	1688	540	10,95	9,03	281 (206)	2,94 (3,99)
At speed recommended by the manufacturer for drawbar work						
38,04 (51,70)	2250	720	14,03	11,56	304 (224)	2,71 (3,68)
PART LOADS						
Governor hand lever in position giving maximum power						
(i) 85 % of torque at maximum power						
32,69 (44,42)	2272	727	12,15	10,01	306 (225)	2,69 (3,66)
(ii) unloaded						
0,83 (1.12)	2341	749	4,49	3,70	-	-
(iii) 50 % of load defined in (i)						
16,50 (22,42)	2297	735	7,78	6,41	389 (286)	2,12 (2,88)

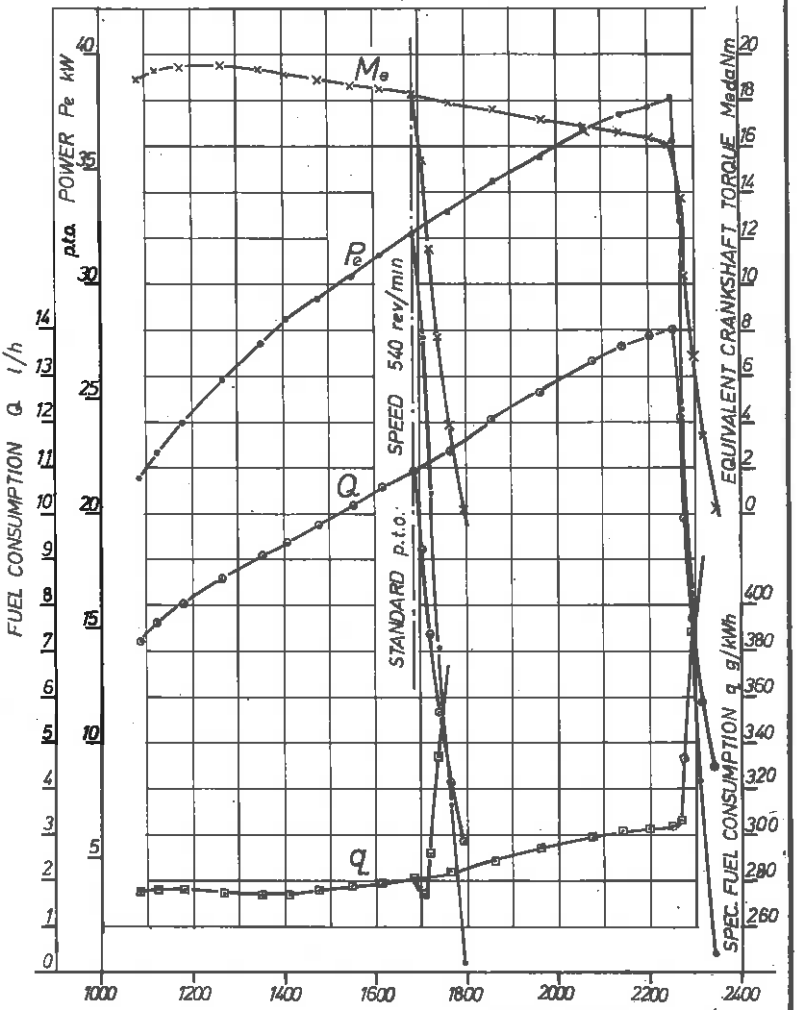
Power kW (hp)	Speed engine rev/min	Speed p.t.o. rev/min	Fuel consumption total l/h	Fuel consumption total kg/h	Fuel consumption specific g/kWh (g/hph)	Specific energy kWh/l (hph/l)
(iv) maximum power						
38,04 (51,70)	2250	720	14,03	11,56	304 (224)	2,71 (3,68)
(v) 25 % of the load defined in (i)						
8,33 (11,32)	2313	740	5,90	4,86	583 (429)	1,41 (1,92)
(vi) 75 % of the load defined in (i)						
24,57 (33,39)	2278	729	9,93	8,18	333 (245)	2,47 (3,36)
Governor hand lever in position giving standard p.t.o. speed at full load						
(i) 85 % of the torque at full load						
27,61 (37,52)	1709	547	9,21	7,59	275 (202)	3,00 (4,08)
(ii) unloaded						
0,30 (0,40)	1797	575	2,86	2,36	-	-
(iii) 50 % of the load defined in (i)						
14,10 (19,16)	1741	557	5,70	4,71	334 (246)	2,47 (3,36)
(iv) full load						
32,19 (43,74)	1688	540	10,95	9,03	281 (206)	2,94 (3,99)
(v) 25 % of the load defined in (i)						
7,21 (9,79)	1769	566	4,14	3,42	475 (349)	1,74 (2,37)
(vi) 75 % of the load defined in (i)						
20,88 (28,38)	1722	551	7,38	6,09	292 (215)	2,83 (3,84)

STANDARD SPECIFIC FUEL CONSUMPTION:

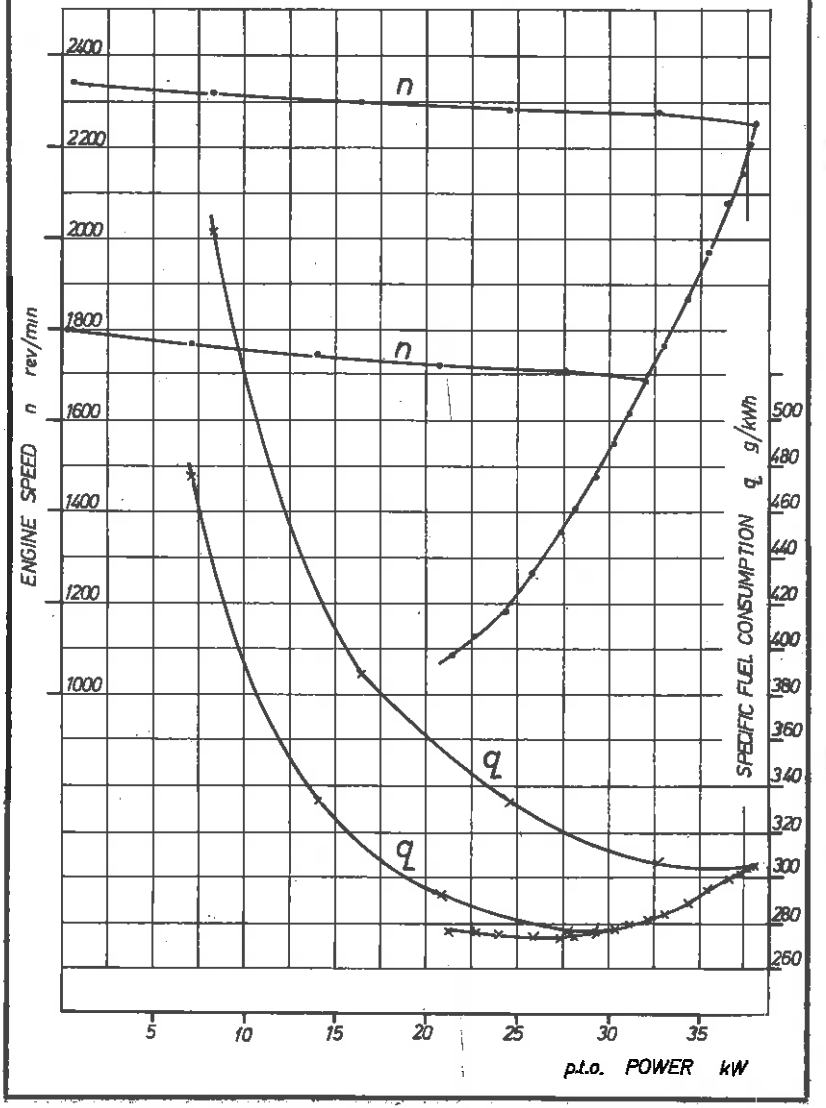
306; 389; 275; 334; g/kWh
(225)(286)(202)(246) (g/hph)

No load, maximum engine speed:	2355 rev/min
Equivalent crankshaft torque at maximum power:	16,14 daNm (16,45 kpm)
Maximum equivalent crankshaft torque:	19,47 daNm (19,85 kpm) at 1268 engine rev/min
Mean atmospheric conditions:	
temperature:	23 °C
pressure:	997 mbar (748 mm Hg)
humidity:	54 %
Maximum temperatures:	
coolant:	92 °C
engine oil:	97 °C
fuel:	22 °C
air intake:	26 °C

IMT - 560


FUEL CONSUMPTION Q l/h
p.t.o. POWER Pe kW
EQUIVALENT CRANKSHAFT TORQUE MedaNm
SPEC. FUEL CONSUMPTION q g/kWh
STANDARD p.t.o. SPEED 540 rev/min
Me
Pe
Q
q
ENGINE SPEED n rev/min
1000
1200
1400
1600
1800
2000
2200
2400

IMT-560


2400
2200
2000
1800
1600
1400
1200
1000
n
n
q
q
ENGINE SPEED n rev/min
SPECIFIC FUEL CONSUMPTION q g/kWh
500
480
460
440
420
400
380
360
340
320
300
280
260
5
10
15
20
25
30
35
p.t.o. POWER kW

(2) DRAWBAR PERFORMANCE

Date of tests: 30th June till 3rd July 1980

Type of track: Tarmacadam

Note: The drawbar test was started with new, run-inn tyres

Gear	Driving speed	Power	Drawbar pull	Engine speed	Slip of wheels	Specific energy	Specific fuel consumpt.	Temperatures Fuel	Co-olant	Engine oil	Atmospheric conditions Tempe-rature	Relative humidity	Pressure
	km/h	kW (hp)	daN (kp)	rev/min	%	kWh/l (hph/l)	g/kWh (g/hph)	°C	°C	°C	°C	%	mbar
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(i) MAXIMUM POWER with ballast height of drawbar above ground 700 mm driving wheels inflation pressure 1,0 bar													
1 L	2,19	17,2 (23,4)	2825 (288o)	228o	15,0	1,87 (2,54)	44o (324)	23	83	85	25	58	1oo2
2 L	3,25	25,5 (34,7)	2825 (288o)	2265	15,0	2,09 (2,85)	395 (29o)	23	88	88	25	58	1oo2
3 L	6,59	32,2 (43,7)	1755 (179o)	225o	5,2	2,29 (3,12)	36o (265)	24	9o	9o	26	53	1oo2
1 H	9,88	32,6 (44,3)	1185 (121o)	225o	2,9	2,32 (3,15)	356 (262)	26	9o	95	26	53	1oo2
2 H	14,85	31,2 (42,4)	755 (77o)	225o	1,6	2,22 (3,01)	371 (273)	27	9o	94	26	53	1oo2
3 H	27,6o	28,2 (38,3)	37o (375)	225o	o,8	2,oo (2,72)	411 (3o3)	27	9o	94	26	52	1oo2
(ii) FIVE-HOUR-TEST at 75 % of drawbar pull at maximum power in 3rd low gear													
3 L	6,79	24,8 (33,7)	1315 (134o)	227o	3,4	2,07 (2,82)	397 (292)	24	88	91	23	53	998

1	2	3	4	5	6	7	8	9	1o	11	12	13	14
		(iii)	FIVE-HOUR-TEST			at drawbar pull corresponding to 15 % wheel slip in test (i)							
2 L	-	-	28oo (285o)	-	-	-	-	26	94	99	24	64	998
		(iv)	MAXIMUM POWER			without ballast			height of drawbar above ground 71o mm driving wheels inflation pressure o,9 bar				
1 L	2,21	13,1 (17,8)	213o (217o)	229o	15,o	1,68 (2,28)	489 (36o)	21	8o	86	22	61	1oo6
2 L	3,28	19,3 (26,2)	212o (216o)	2275	15,o	1,94 (2,64)	424 (312)	23	83	89	23	57	1oo6
3 L	6,33	31,2 (42,4)	1775 (181o)	225o	9,4	2,21 (3,o1)	371 (273)	24	87	91	23	57	1oo6
1 H	9,8o	32,9 (44,6)	1265 (129o)	225o	4,6	2,34 (3,18)	352 (259)	26	91	94	24	54	1oo6
2 H	14,9o	32,5 (44,1)	785 (8oo)	225o	2,3	2,3o (3,13)	357 (263)	26	91	95	24	54	1oo6
3 H	27,7o	3o,6 (41,6)	395 (4o5)	225o	1,2	2,18 (2,97)	376 (277)	26	9o	95	24	54	1oo6

Remark: Five hour test at pull corresponding to 15 % wheelslip (test iii) was carried out with aditional ballast. Therefore results of test for power, wheelslip, driving speed and fuel consumption would not have ony practical value.

Total engine oil consumption during ten hours duration of tests (ii) and (iii) was 41 g/h.

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment front: 7,5o - 16 6 ply
rear: 16,9 - 28 6 ply

Track of wheels front: 14oo mm
rear: 15oo mm

	Without brakes		With brakes	
	left-hand	right-hand	left-hand	right-hand
	m	m	m	m
Radius of turning space	4,75	4,6o	4,o3	3,86
Radius of turning circle	4,63	4,48	3,9o	3,73

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground 772 mm

Distance forward from rear axle centre 787 mm

Distance from tractor's median plane 8 mm to the right

(5) BRAKING PERFORMANCE

(i) SERVICE BRAKE

Date of test: 9th July 198o
Type of track: Tar macadam
Type of decelerometer: Siemens B4

Weight of tractor with driver:
ballasted: 3445 kg
unballasted 2545 kg

Cold brakes

		With ballast		Without ballast	
Travelling speed	km/h	25,o		25,o	
Deceleration	m/s^2	4,1		4,2	
Stopping distance	m	7,o		6,8	
Force on pedal	daN(kp)	36	(37)	32	(33)
Force on pedal to achieve a deceleration of 2,5 m/s^2	daN(kp)	23	(23)	21	(21)

Brake fade characteristics (hot test)

Deceleration	hot/cold %	98 lol
Stopping distance	cold/hot %	99 loo
Force on pedal	cold/hot %	96 lo2

(ii) PARKING BRAKE

Tractor with ballast

Tractor facing up 16 % slope

Pull on handbrake 34daN(35 kp), tractor does not roll

Tractor facing down 16 % slope

Pull on handbrake 34daN(35 kp), tractor does not roll

(6) AMBIENT NOISE EMITTED BY THE TRACTOR

Date of test: 17th July 1980
Type of track: Tarmacadam
Type of sound lever meter: BRUEL & KJAER mod. 2209

Results of test

Gear: 3rd high
Travelling speed
before acceleration: 21,4 km/h
Sound level: 90,2 dB(A)

(7) NOISE AT THE DRIVER'S EAR LEVEL

Date of test: 17th July 1980
Type of track: Tarmacadam
Type of sound lever meter: BRUEL & KJAER mod. 2209

Results of test

+) Tractor without cab or frame

Gear	Drawbar pull at which the tractor develops the maximum sound level		Travelling speed nominal	effective	Sound level
	daN	(kp)	km/h	km/h	dB(A)
1 L	2060	(2100)	2,58	2,20	102,9
2 L	2060	(2100)	3,88	3,30	103,4
3 L +)	1735	(1770)	7,11	6,60	104,3
1 H	1180	(1200)	10,34	9,90	104,2
2 H	735	(750)	15,51	15,00	103,8
3 H	Light load		28,44	28,50	103,1

+) The 3rd L gear corresponds to the travelling speed nearest to 7,5 km/h

(8) POWER LIFT AND HYDRAULIC PUMP PERFORMANCE

Date of tests: 14th and 15th July 1980

HYDRAULIC PUMP

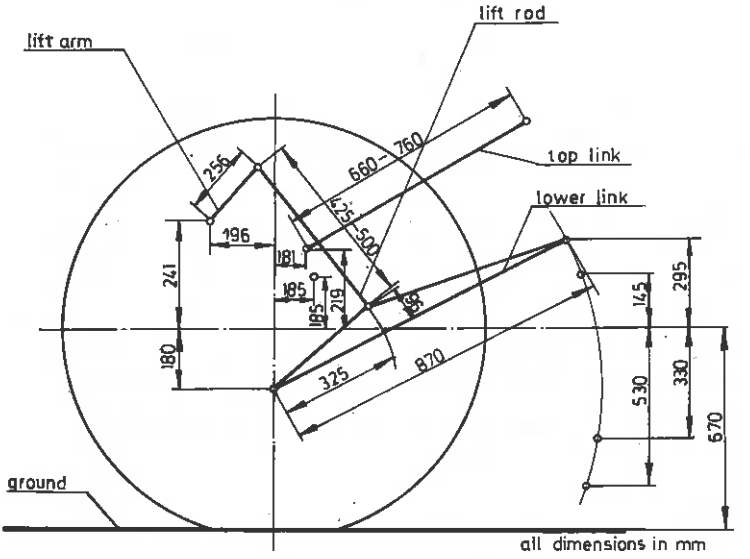
(1) Opening pressure of relief valve 170 bar
Sustained pressure by open relief valve 186 bar

(2) Pump delivery rate at minimum pressure
at rated engine speed 20,7 l/min

(3) Pump delivery rate at max.hydraulic power 19,4 l/min
coresponding delivery pressure 170 bar
hydraulic power 5,5 kW (7,5 hp)

POWER LIFT

Dimensions of linkage geomatry for
the table on page 23



LINKAGE GEOMETRY when connected to the standard frame	Maximum mechanical advantage	Minimum mechanical advantage
Projected length in side view:		
Lower links	87o mm	87o mm
Lift arms	256 mm	256 mm
Lift rods	5oo mm	425 mm
Top link	695 mm	698 mm
Distance of lift rod connection point from pivot point of lower link	325 mm	325 mm
The following dimensions are given relative to rear axle centre line 67o mm above ground		
Lower link pivot point	o mm 18o mm below	
Top link pivot point	181 mm behind, 219 mm above	185 mm behind, 185 mm above
Lift arm pivot point	196 mm forward, 241 mm above	196 mm forward, 241 mm above
Maximum and minimum height of lower link hitch points	145 mm above, 53o mm below	295 mm above, 33o mm below
Height of lower link hitch points above ground when locked in highest transport position	815 mm	965 mm

LIFTING FORCES

Lifting heights relative to horizontal lower links

mm	-475	-400	-350	-300	-210	-200	-150	-100
At hitch points maximum mechanical advantage								
daN (kp)							1760 (1790)	1740 (1770)
minimum mechanical advantage								
daN (kp)			1655 (1685)	1640 (1675)		1630 (1665)		1620 (1650)

Max. force exerted throughout the whole range 1530 dN (1560 kg)

Front of tractor does not lift

At test frame maximum mechanical advantage								
daN (kp)	1440 (1465)	1430 (1460)		1410 (1440)		1385 (1410)		1355 (1380)
minimum mechanical advantage								
daN (kp)					1590 (1620)	1585 (1615)		1515 (1545)

Max. force exerted throughout the whole range 1085 daN (1105 kp)

Front of tractor does not lift when fitted with maximum front ballast

0	+100	+200	+300	+325	+400	+475	+500	+595
length of lift rods 425 mm								
172o (1755)	171o (174o)	170o (173o)	166o (169o)		161o (164o)	153o (156o)		
length of lift rods 500 mm								
1615 (1645)	161o (164o)	158o (161o)	152o (155o)	1485 (1515)				
length of lift rods 500 mm								
1315 (134o)	1255 (1275)	1175 (1195)	11oo (112o)	1o85 (11o5)				
length of lift rods 425 mm								
144o (1465)	135o (138o)	1245 (127o)	1145 (1165)		1o15 (1o35)		855 (875)	65o (665)

All values of forces are given for pressure at maximum hydraulic power (17o bar), calculated from measurements at maximum oil pressure (186 bar)