MINISTERO DELL'AGRICOLTURA E DELLE FORESTE
Direzione Generale Produzione Agricola

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO
Via Milano, 43 - 24047 TREVIGLIO (BG) ITALY
tel. 0363/49603

O.E.C.D. n.1009
restricted code

Test in accordance with O.E.C.D. Restricted Standard Code for the official testing of agricultural tractors

Report on test of: SAME LASER 100 VDT "4WD"



Submitted for test by: Same Trattori S.p.A.
V.le Cassani 15
24047 TREVIGLIO (BG)

Date of approval O.E.C.D.: 16/05/1986

Period of test: december 1985

I.S.M.A. - TREVIGLIO
Via Milano, 43

TEST n.022

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ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA

SEZIONE DI TREVIGLIO

TABLE OF CONTENTS

- Specification of tractor ..... pag. 2
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- Power lift and hydraulic power test ..... pag. 19
- Drawbar performance ..... pag. 21

All stated dimension and tests referred to tyre size 14.9/28 (6plr) at front and 16.9/38 (8plr) at rear, as well as to track whiths 1830 mm at front and 1830 mm at rear.

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

- Tractor manufacturer's: SAME TRATTORI S.p.A. TREVIGLIO (BG)
- Submitted for test by: the manufacturer
- Selected by: the manufacturer with the agreement of ISMA
- Place of running in: TREVIGLIO
- Duration of running in: 50 hours

I - SPECIFICATIONS OF TRACTOR

TRACTOR

- Make: SAME;
- Model : LASER 100 V DT "4WD";
- Type: WHeeled tractor, unit constr., all wheel drive tractor;
- Serial no.: 1688;
- First serial no.:1001;

ENGINE

- Make: SAME;
- Model: 1055 P;
- Type : Air cooled 4 stroke Diesel engine direct injection;
- Serial n.: 12697;

Cylinders

- Number/disposition: 5 vertical in line;
- Bore/stroke: 105/120 mm;
- Capacity: 5195 cc;
- Compression ratio: 17/1;
- Arrangement of valves: Overhead;
- Cylinder liners: without liners;

Fuel system

- Fuel feed system: Ac corone fuel feed pump;
- Make, type and model of fuel filter: FIAMM FNA 160/00;
- Capacity of fuel tank: 120 l;
- Make, type and model of injection pump: BOSCH PFR 3K 80 A 392/2 and PFR 2K 80 A 337/2, in line injection pump
- Serial number of injection pump: whitout number;

- Manufacturer's production setting of injection pump:
  . flow rate 75 ±2 mm3/stroke at rated speed and full load;
  . timing 24 ± 0.5 before TDC;
- Make, type and model of injectors:BOSCH DLLA 160 S 255 multihole injection nozzles;
- Injection pressure: 215 ± 10 bar;

Governor

- Make: SAME;
- Type: mechanical variable speed;
- Model: 062.1616.0;
- Governor range of engine speed from 650 to 2374 rev/min;
- Rated engine speed : 2180 rev/min;

Air Cleaner

- Main filter
  . Make: FIAMM;
  . Type: Dry paper element filter;
  . Model: FAR 329;
  . Location : front of engine;
- Maintenance indicator : with the warning lamp on the dashboard;

Lubrication system

- Type : forced feed from gear pump;
- Total oil capacity including filter: 13.3 l;
- Oil change period : 125 hrs;
- Type of filter : FIAMM 4813 IN;
- Number: 1;
- Filter change period: 300 hrs;
- Oil specifications (see pag. 14)

Cooling system

- Type and detail: air cooling with axial blower;
- No. of fan blade : 6;
- Diameter : 274 mm;
- Type of temperature control: none.

Starting system

- Safety device: Preventing engine start in gear;
- Make: BOSCH;
- Model: electromagnetic engagement;

- Type: JF 12 V;
- Power: 3 kW for start motor rating;
- Starting system for low temperatures: thermostarter(opt.);

Electrical equipement

- Voltage: 12 V;
- Generator
  . Make: BOSCH;
  . Type: alternator K1 14V 55 A 20;
  . Power: 45 A, 770 W;
- Battery : 1 lead acid;
  . Capacity: 110 Ah at 20 hours;

Exhaust system

- Make: SAME;
- Type: 4 chambers reflection absorption;
- Model: 258.5630.3;
- Location: on the left hand side of engine cowling in vertical position;
- Height of outlet above ground: 2750 mm;

TRANSMISSION

Clutch: utilized only for travelling of tractor
- Make: SAME;
- Type : single disc dry clutch;
- Model: 042.23;
- Disc diameter: 352 mm;
- Control system: hydraulically operated by pedal self readjusting;

Gear box

- Make: SAME;
- Type: mechanical syncromesh speed change gear with 4 speeds forward, with 3 ranges speed 1 reverse group and 1 minireduction gear;
- Model: 042.31;
- No. speeds: 24 forward and 12 reverse;
- Available options: 12 forward and 3 reverse or 20 forward and 12 reverse;

Rear axle and final drives

- Make: SAME;
- Type: bevel gear differential and epicyclic final drive;
- Model: 042.44;
- Differential lock: yes
- Model: SAME;
- Type: mechanical;
- Control system: engaged or disengaged with pedal;

Front axle and final drive

- Make: SAME;
- Model: original SAME system with central shaft bevel gear drive, differential and epicyclic final drive;
- Type: 042.43;
- Differential lock: yes;
  - Model: SAME;
  - Type: mechanical;
  - Method of engagement: with pedal;
  - Metod of disengagement: with pedal;

Transmission lubrication

- Oil capacity
  - Gear box, rear axle, final drive,: in common, total capacity filter including 75 l;
  - Change period: 1200 hrs;
  - Power lift and hydraulic system: 20 l;
  - Oil change period: 1200 hrs;
  - Front axle and final drive: total capacity 13 l;
  - Changing: 1200 hrs;
- Recommended oil: see pag. 14.

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SAME LASER 100 VDT "4WD" TEST N.022 6

Total ratios and speeds

Group	Number of engine revolutions for one revolution of the driving wheels	Nominal traveling speed at a rated engine speed of 2180 rev/min
FORWARD		
1L MR	527.000	1.240
1L	449.000	1.455
2L MR	373.700	1.748
2L	318.500	2.052
3L MR	287.900	2.269
3L	245.300	2.663
4L MR	230.200	2.838
4L	196.200	3.331
1N MR	175.700	3.719
1N	149.700	4.365
2N MR	124.600	5.245
2N	106.200	6.155
3N MR	96.000	6.808
3N	81.800	7.989
4N MR	76.700	8.614
4N	65.400	9.992
1V MR	58.600	11.158
1V	49.900	13.095
2V MR	41.500	15.734
2V	35.400	18.465
3V MR	32.000	20.423
2V	27.300	23.968
4V MR	25.600	25.542
4V	21.800	29.976
REVERSE		
1L RM	448.900	1.455
2L RM	318.400	2.052
3L RM	245.300	2.664
4L RM	196.100	3.332
1N RM	149.600	4.366
2N RM	106.100	6.157
3N RM	81.800	7.992
4N RM	65.400	9.995
1V RM	49.900	13.099
2V RM	35.400	18.471
3V. RM	27.300	23.975
4V RM	21.800	29.985

Tyre size 16.9/38 inflaction pressure: 1.7 bar
Tyre radius index: 795 mm (E.T.R.T.O. norm)

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POWER TAKE-OFF

Main power take-off

- Type: independent at rear of tractor, in tractor's median plane, engaged or disengaged through hand lever. Driven by multiplate clutch wet independent of travel clutch; ISO standard 500-1979;

Power take-off proportional to engine speed

540 rev/min

It is possible,through 6 screws, to mount: one take-off shaft end at 6 or at 21 splines. Changing speeds through external hand lever;

- Location:at rear of tractor;
- Diameter of power take-off shaft end: 34.9 mm;
- Number of splines: 6 in conformity with "ISO Standard 500 - 1979";
- Height above ground with tyre size 16.9/38: 820 mm;
- Distance from the median plane of the tractor 0 mm;
- Distance behind rear axle: 510 mm;
- PTO speed: 601 rev/min at rated engine speed;
- Engine speed: 1958 rev/min at standard power take-off speed 540 rpm;
- Ratio of rotation speeds (engine speed/p.t.o. speed): 3.627;
- Max power and torque trasmissible:130 kW and 102.5 daNm;
- Direction of rotation (viewed facing driving end): clockwise;

1000 rev/min

- Location: at rear of tractor;
- Diameter of power take-off shaft end: 34.9 mm;
- Number of splines: 21 in conformity with "ISO Standard 500 - 1979";
- Height above ground with tyre size 16.9/38: 820 mm;
- Distance from the median plane of the tractor 0 mm;
- Distance behind rear axle: 510 mm;
- PTO speed at rated engine speed: 1025 rev/min
- Engine speed 2125 rev/min at standard power take-off speed: 1000 rpm;
- Ratio of rotation speeds (engine speed/p.t.o. speed): 2.125;
- Direction of rotation (viewed facing driving end): clockwise;

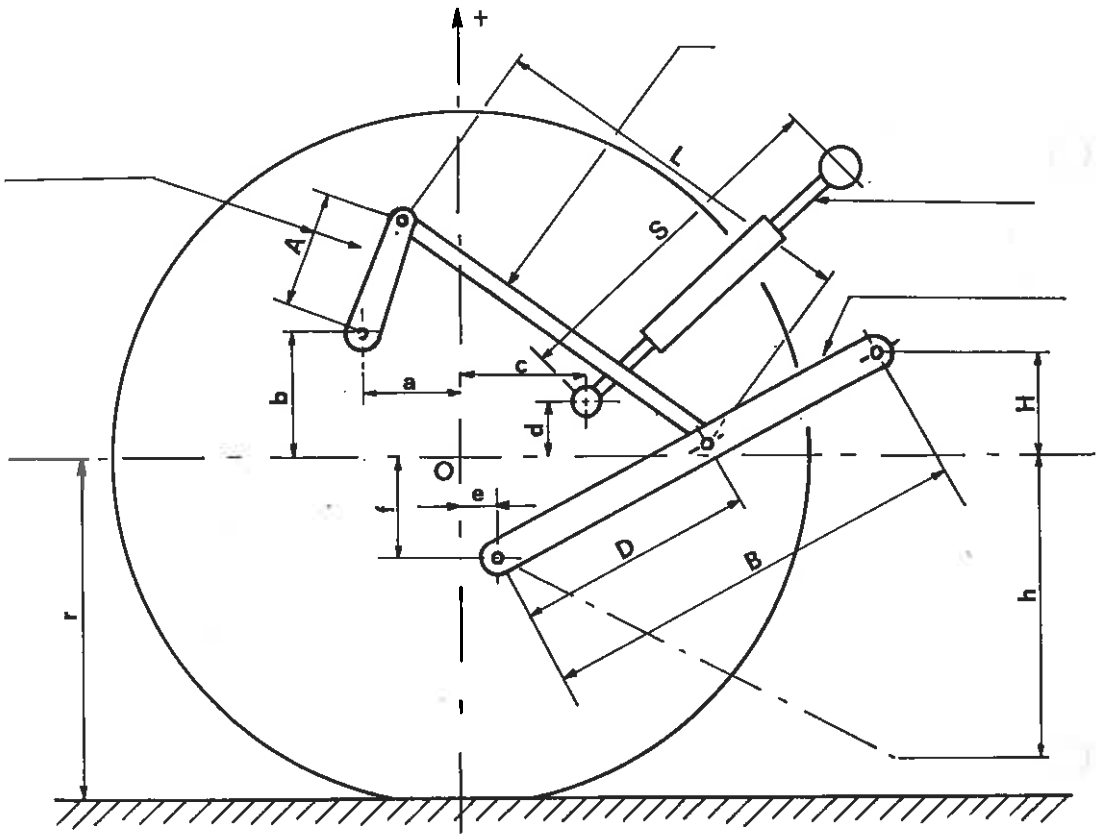
POWER LIFT

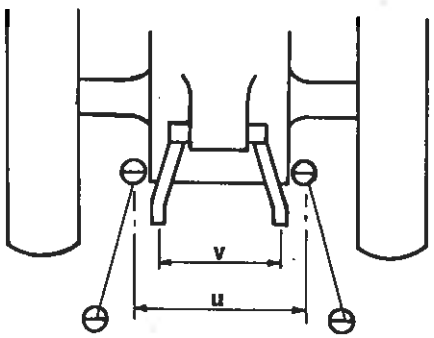
- Make: SAME;
- Type: LOAD SENSING open centre system;
- Type and number of cylinders: 1 at simple effect;
- Type of locking for the transport: mechanical, with screwed tie rods that lock the lower links;
- Exercise valve pressure: 180 bar;
- Opening pressure anti-shock valve: 210 bar;
- Lift pump type: hydraulic rotary pump,driven from engine shaft;
- Transmission between pump and engine: mechanical
- Type and number of filters: 1, replaceable paper cartridge;
- Changing: when the filter clogging warning lamp is lighted;
- Oil capacity: 20 l;
- Site of oil reservoir: power lift box;
- Position and No.of additional oil plugs: 4 ways distributor at rear of tractor;
- Maximum volume of oil available to external cylinders: 15 l;
- Recommended oil (see pag. 14)

Three-point linkage

- Category: 2 in conformity with ISO 730/I;

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Specify the settings for the lifting test

Rear tyres (size 16.9/38)	(r)	795 mm
Front tyre (size 14.9/28)	(r')	640 mm
Length of lift arms	(A)	300 mm
Length of lower links	(B)	860 mm
Distance of lift arm :horizontally	(a)	140 mm
pivot point from rear :vertically	(b)	450 mm
wheel centre line		
Horizontally distance between the 2 lower link points	(u)	645 mm
Horizontally distance between the 2 lift arm end points	(v)	550 mm
Length of upper link	(S)	from 500 to 780 mm
Distance of upper link horizontally	(c)	420 mm
pivot point from rear vertically	(d)	390 mm
wheel centre line		
Distance of lower link horizontally	(e)	125 mm
pivot point from rear vertically	(f)	190 mm
wheel centre		
Distance of lower link pivot points to lift rod pivot points on lower link	(D)	410-450 mm
Length of lift rods	(L)	from 730 to 850 mm
Height of lower hitch points:		
- in Low position	(h)	595 mm
- in High position	(H)	130 mm
relative to the rear wheel centre line, situated 795 mm above the ground level		

SWINGING DRAWBAR

- Type: SAME 97320;
- Height above ground (tyre size:16.9/38) max 565 mm
  min 490 mm
- Type of adjustment: reversible;
- Distance of hitch point from rear axle axis, horizontally: 820 mm;
- Distance of hitch point fron power take-off shaft end
  . vertically: 252 - 327 mm below;
  . horizontally: 330 mm forward;
- Lateral adjustement (centre of clevis):
  (right hand) 270 mm;
  (left hand) 270 mm;
- Distance of pivot point from rear axle axis, horizontally: 25 mm forward;
- Diameter drawbar pin hole: 33 mm;

TRAILER HITCH

- Type: SAME;
- Height abbve ground: 600 - 790 mm;
- Distance of hitch point from rear axle axis, horizontally: 670 mm;
- Distance of hitch point from power take-off shaft end:
  . vertically: behind 180 - 10 mm;
  . horizontally: 180 mm;
- Maximun vertical permissible load: 1500 daN;

HOLED DRAWBAR

- Number of holes: 7;
- Distance between holes: 100 mm;
- Hole diameter: 28.5 mm;
- Thickness/width of the drawbar: 30 - 80 mm;
- Height above ground , minimum 300 mm;
  maximum 1090 mm;
- Horizontal distance to power take-off shaft end (rear) 650 mm;
- Diameter of the pinhole: 28 mm.

STEERING

- Specifications: hydrostatic steering whit BOSCH hydraulic gear pump HY/ZFS 11/11 L 201;

- Two rams at double effect acting directly on front axle.
- Make: ZAHNRADFABRIK FRIEDRYCHSHAFEN AG;
- Model: 8494;
- Type: SERVOSTAT;
- Working pressure: 120 bar;
- Oil capacity: 2 l;
- Oil change period: 1200 hrs;
- Filter change period: when the filter clogging warning lamp is lighted;
- Recommended oil (see pag.14)

BRAKE

Service brake

- Make: SAME TRATTORI S.p.A.;
- Model: 042.64;
- Type: oil bath disc, total 4 discs, mounted before 2 at front and 2 at rear differential half schafts.Front disc dia=224 mm ; rear disc dia=302 mm FRENDO HDT 303 lining material;
- Method of operation: hydaulically acting with 2 pedals
- Service brake optional : the tractor have only the braking on the rear differential half shafts;
- Trailer braking take-off: none.

Parking brake

- Type: fully indipendent by service brake, 3 oil bath discs mounted on the pinion shaft in the gear box ISOBOND SINTERIX lining material;
- Method of operation: mechanically by hand lever

Steering brake : divided pedal of service brake for normal use locked together;

STEERING WHEELS

- Number: 2;
- Location: at front;
- Tyres: radial;
  - Size: 14.9/28;
  - Ply rating: 6;
  - Maximum permissible load on each tyre: 1578.9 daN;
  - Corresponding inflation pressure: 1.4 bar;
- Track widths: 1690 - 1790 - 1830 mm;
- Regulation: changing the position of the rims in respect of the disc;

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DRIVING WHEELS

- Number: 4;
- Location: 2 at front and 2 at rear;
- Tyres:
  . Size: 16.9/38;
  . Ply rating: 8
  . Type of casing: radial;
  . Maximum permissible load on each tyre: 2471.3 daN;
  . Corresponding inflation pressure: 1.7 bar;
- Track widths: 1630-1630-1730-1830-1930-2030-2130 mm;
- Regulation: changing the position of the rims in respect of the disc;

WHEELBASE: 2600 mm;

PROTECTIVE STRUCTURE

Specifications

- OECD approval number: CSD 0758/10;
- Trade name: SAME C 29;
- Manifacturer's name: SAME;
- Protective device: cab;

Materials used in the construction and dimensions

See OECD Test Report on Protective Stuctures.

DRIVER'S SEAT

- Make: GRAMMER;
- Type of suspension: DS 85 H;
- Type of damping: shock absorber;
- Range of adjustment, longitudinal 150 mm;
  vertical 60 mm;

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LIGHTING

Lighting system in accordance with CEE 78/933

	Height above ground of centre with tyre mm	Size mm	Distance from out side edge of trac tor to centre at 1690 mm track width mm
Headligths	1085	110*110	325
Front park.lights	1955	110*35	390
Front finger post	1990	110*35	390
Rear park.lights	1730	110*70	455
Rear finger post	1705	70*110	355
Stop	1705	70*110	535
Reflectors	1665	110*35	455

Tyre size: 14.9/28 front - 16.9/38 rear.

TEST CONDITIONS

- Overall dimensions with tyres:
- Front 14.9/28 - Rear 16.9/38

	Length (mm)	Width (mm) min	Width (mm) max	Height (mm) at top of exaust sil.	Height (mm) at top of protec.struc.
Without ballast	4280	2100	2620	2750	2700
With ballast	4675	2100	2620	2745	2695

Ground clearance

-Clearance-limiting part: 480 mm

Track setting

- Front: 1690 mm;
- Rear: 1630 mm;

Tractor mass (without driver but with thanks full with cab) Water in tyres none;

	Units	Front	Rear	Total
Without ballast	kg	1990	2540	4400
With ballast	kg	2310	2740	5050

Fuel and lubricants recommended and used in tests

Fuel
Type: AGIP Diesel, DIN 51601;
Specific gravity at 15 °C: 0,835 kg/l;

Engine oil
- Type: AGIP F1 UNITRACTOR SAE 20 W/40;
- Viscosity: 16.2 cSt;

Transmission oils and rear, front axle and final drive oils:
- Type: AGIP ROTRA THT SAE 85 W/90;
- Viscosity: 17.7 cSt;
- Viscosity index: 95;

Power lift oil
- Type: AGIP F1 ROTRA THT SAE 85 W/90;
- Viscosity: 17.7 cSt;

Steering oil
- Type: AGIP F1 DEXTRON GM TYPE A SUFFIX A;
- Viscosity: 7.5 cSt;

Recommended grease: AGIP F1 GREASE 30;
- Number of lubrication points: 13;

ISTITUTO SPERIMENTALE PER
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SEZIONE DI TREVIGLIO

II - TEST RESULTS

A. COMPULSORY TESTS RESULTS

1) MAIN POWER TAKE-OFF PERFORMANCE

- Date and location of test: 12 th DIC 1986 - I.S.M.A. TREVIGLIO (BG) ITALY
- Type of dynamometer: ZOELLNER 350 AC

Power	Speed		Fuel consumption			Specific
	Engine	P.T.O.	Hourly	Specific		Energy
kW	rev/min	rev/min	l/h	kg/h	g/kWh	kW l/h
MAXIMUM POWER - 2 - HOUR TEST						
66.54	2180	1025	19.58	16.45	247	3.40
POWER AT RATED ENGINE SPEED						
66.54	2180	1025	19.58	16.45	247	3.40
STANDARD POWER TAKE-OFF SPEED (1000+/-25 Rev/min)						
66.01	2125	1000	19.43	16.32	247	3.40
PART LOADS						
i) torque corresponding to maximum power at rated engine speed						
66.54	2180	1025	19.58	16.45	247	3.40
ii) 85% of torque obtained in i)						
56.51	2255	1061	17.43	14.64	260	3.35
iii) 75% of torque defined in ii)						
44.50	2287	1076	14.51	12.19	274	3.06
iv) 50% of torque defined in ii)						
30.11	2331	1092	11.09	9.32	309	2.71
v) 25% of torque defined in ii)						
15.23	2348	1105	8.37	7.03	461	1.82
vi) unloaded						
0	2374	1117	5.43	4.56	-	-

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PART LOADS AT STANDARD POWER TAKE-OFF SPEED

Power	Speed		Fuel consumption			Specific
	Engine	P.T.O.	Hourly	Specific		Energy
kW	rev/min	rev/min	l/h	kg/h	g/kWh	kW h/l
i) The torque corresponding to maximum power available						
66.01	2125	1000	19.43	16.32	247	3.40
ii) 85% of torque obtained at maximum power						
58.06	2200	1035	17.05	14.32	247	3.40
iii) 75% of torque defined in ii)						
44.18	2231	1050	13.78	11.58	262	3.21
iv) 50% of torque defined in ii)						
29.86	2264	1065	10.57	8.88	297	2.82
v) 25% of torque defined in ii)						
15.11	2292	1078	7.82	6.57	435	1.93
vi) unload						
-	2319	1091	5.39	4.53	-	-

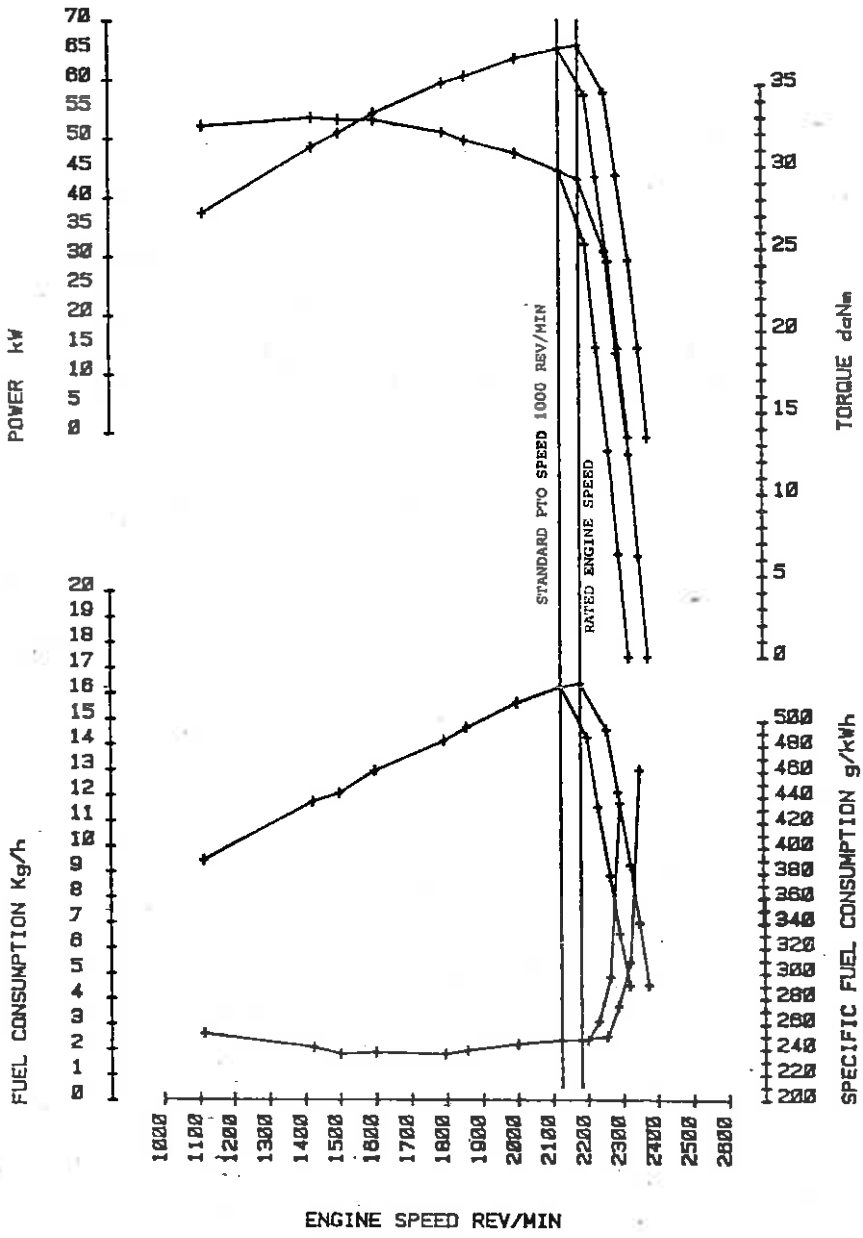
STANDARD SPECIFIC FUEL CONSUMPTION: 250/309/247/297 g/kWh

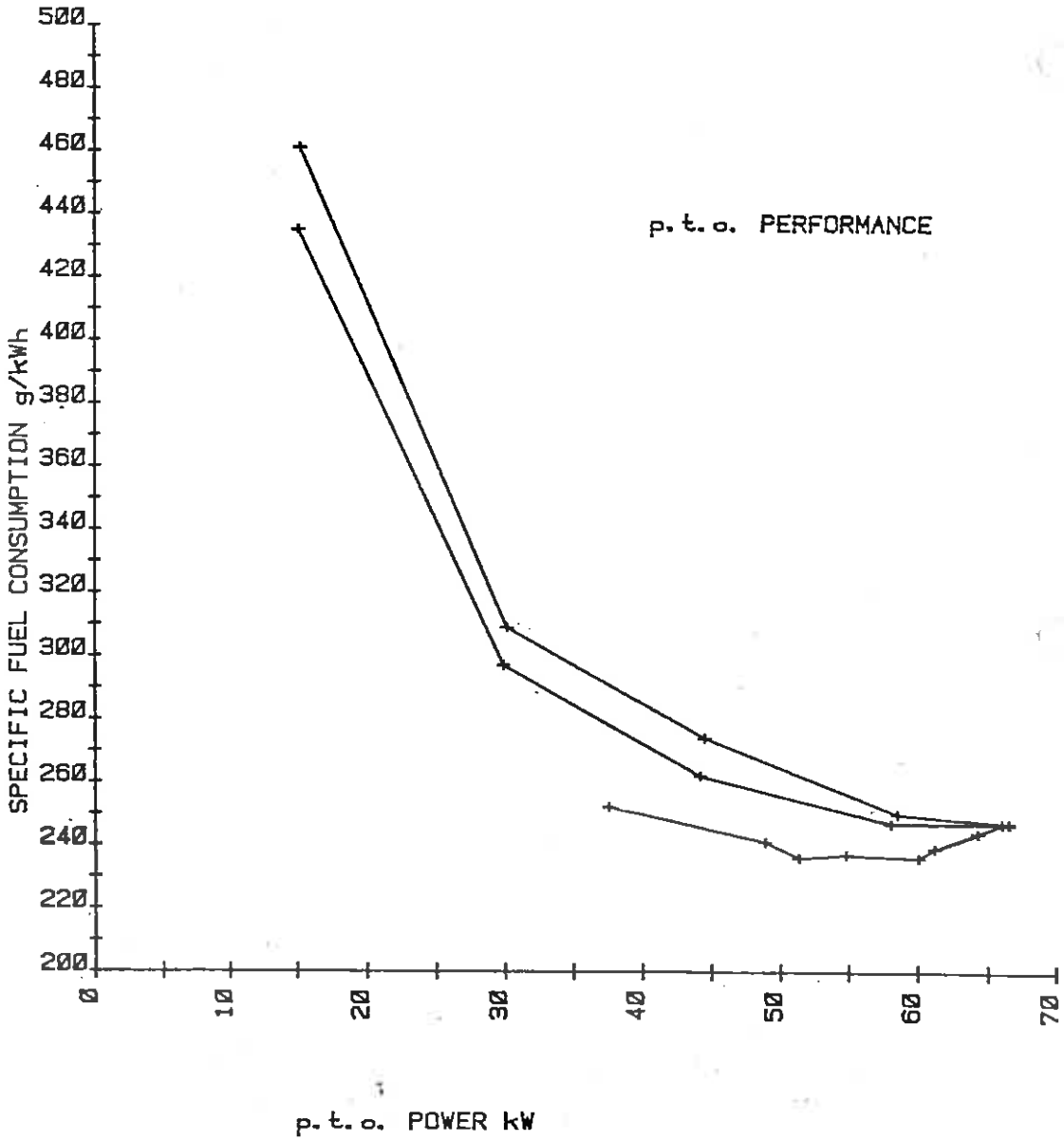
- No load maximum engine speed: 2374 rev/min
- Torque (1) at maximum power: 29.19 daNm
- Maximum torque (1) (engine speed: 1424 rev/min): 32.81 daNm
- Mean atmospheric conditions : Temperature 20°C
  Pressure 997 mmbar
  Relat.humidity 85%
- Maximum temperatures : Coolant 101°C
  Engine oil 118°C
  Fuel 36°C
  Engine air intake 25°C

(1) The torque is the equivalent crankshaft torque.

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p. t. o. PERFORMANCE
SPECIFIC FUEL CONSUMPTION g/kWh
500
480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
0
10
20
30
40
50
60
70
p. t. o. POWER kW

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(2) POWER LIFT AND HYDRAULIC POWER TEST
- Date and location of tests: 16th dic 1985 - ISMA Treviglio (BG)

		at hitch point	on the frame
Height of lower hitch point above ground in down position	mm	200	200
Vertical movement	mm	725	735
Maximum corrected force exerted through full range	daN	2826	3902
Corresponding pressure of hydraulic fluid	bar	161.5	161.5
Moment about rear axle	daNm	2924	6419
Maximum tilt angle of mast over range of lift	Degrees	--	11.5

Lifting heights relative to the horizontal lower links

mm	-405	-300	-200	-100	0	100	200	300	320	330
Lifting forces at hitch points										
daN	2825	3532	3886	4300	4326	4432	4679	4547	4414	---
Lifting forces at test frame										
daN	3902	4414	4423	4397	4370	4388	4400	4300	4250	4220

HYDRAULIC POWER TEST
Sustained pressure with relief valve open: 179.7 bar;
Pump delivery rate at min pressure: 66 l/min;

Hydraulic power	kW	flow rate l/min	pressure bar	oil temp. °C
At 90% of the actual reliev valve setting	17.22	64	161.5	65
Maximum	17.22	64	161.5	65

Tapping point used for test : at rear of tractor
Hydraulic fluid: see pag.14

(3) - MAXIMUM POWER TRANSMISSION AND FUEL CONSUMPTION AT THE DRAWBAR
(UNBALLASTED TRACTOR)

- Date of tests: 8/12/1985
- Type of track: concrete
- Type and size of tyres front: 14.9/28 6 plr
  rear : 16.9/38 8 plr

Height drawbar above ground : 710 mm
Tyre inflation pressure : front 1.4 bar
rear 1.7 bar

Gear	Power	Draw. pull	Speed	Eng. spd	Slip of wheel	Specific ener.cons.	fuel	Temperatures cool.eng.		Atm. cond. temp.	hum.	pres.
n.	kW	daN	km/h	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mmbar
1) MAXIMUM DRAWBAR IN TESTED GEARS													
1 N	43.65	4032	3.90	2258	13.8	2.45	343	15	23	60	9	80	997
2 N MR	48.61	4169	4.20	2184	12.9	2.46	341	15	23	60	9	80	997
2 N	50.28	3551	5.10	2194	6.8	2.57	326	15	23	60	9	80	997
3 N MR	51.10	3146	5.85	2189	5.8	2.63	319	15	24	60	9	80	997
3 N	52.80	2707	7.00	2192	4.0	2.69	312	16	24	61	10	78	998
4 N MR	53.60	2599	7.40	2190	3.6	2.72	309	16	25	61	10	77	998
4 N	55.80	2226	9.00	2182	2.4	2.82	298	16	25	60	10	76	998
1 V MR	57.51	1883	11.00	2183	1.5	2.91	288	16	25	60	10	76	1000
1 V	58.41	1619	13.00	2179	1.2	2.96	284	15	24	59	10	75	1000
2 V MR	57.08	1285	16.00	2178	1.0	2.89	290	15	24	59	10	75	1000

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

SAME LASER 100 VDT "4WD" TEST N.022 22

Gear	Power	Draw. pull	Speed	Eng. spe.	Slip of wheel	Specific ener.cons.	fuel cool.	Temperatures eng.temp.	hum.	Atm. cond. pres.
n.	kW	daN	km/h	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mmbar

TRANSMISSION AND FUEL CONSUMPTIOM CHARACTERISTICS

i) - Selected gear													
1 V	58.41	1619	13.00	2179	1.2	2.96	284	15	24	59	10	75	1000
ii) - 75% Of pull at maximum power													
1 V	46.15	1213	13.70	2220	1.0	2.86	350	16	23	57	11	70	1000
iii) - 50% of pull at maximum power													
1 V	31.90	809	14.25	2285	1.0	2.37	422	16	24	57	11	70	1000
iv) - Highest gear giving the same pull as in ii) ,reduced engine speed													
2 V MR	45.48	1213	13.50	1834	1.0	3.00	333	16	24	57	11	70	1000
v) - Highest gear giving the same pull as in iii), reduced engine speed													
2 V MR	31.90	809	14.20	1914	1.0	2.49	401	16	24	56	11	70	1000

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

SAME LASER 100 VDT "4WD" TEST N.022

REMARKS: no remarks

TEST ENGINEER
(ing.Giovanni SANTORO)

THE DIRECTOR OF TESTING STATION
(prof.Giuseppe COLZANI)

HEAD OF ISMA - ROMA
(prof.Alfio CAMMILLI)