ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

O.E.C.D. n.1103

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

Report on test of: SAME SOLAR 50 DT "4WD"



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

Date of approval O.E.C.D.: 20.10.1987

Period of test: Apr. - Sept. 1987

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

TEST n.035

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All stated dimension and tests referred to tyre size 11.2/20 (6plr) at front and 14.9/28 (6plr) at rear, as well as to track whiths 1450 mm at front and 1460 mm at rear.

- 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 : SOLAR 50 DT "4WD";
- Type: Wheeled tractor, unit constr.,all wheels drive tractor;
- Serial no: 1100;
- First serial no.:1001.

ENGINE

- Make: SAME;
- Model: 983;
- Type : Air cooled 4 stroke Diesel engine direct injection;
- Serial n.: 39531.

Cylinders

- Number/disposition: 3 vertical in line;
- Bore/stroke: 98/120 mm;
- Capacity: 2715 cc;
- Compression ratio: 17.1/1;
- 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 166/00;
- Capacity of fuel tank: 55 l;

- Make, type and model of injection pump: ALTECNA TYP PFR 3K80/7048 immersed pump whitout serial number;
- Manufacturer's production setting of injection pump:
  . flow rate 47 ± 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: 220 ± 10 bar.

Governor

- Make: SAME;
- Type: mechanical variable speed;
- Model: 029.1616.0;
- Governor range of engine speed from 675 ± 25 to 2372 rev/min;
- **Rated engine speed** : 2200 rev/min.

Air Cleaner

- Main filter
  . Make: DONALDSON;
  . Type: Dry paper element filter;
  . Model: FKG 06-5296;
  . 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: 6.2 l;
- Oil change period : 125 hrs;
- Type of filter : FIAMM 4803 IN;
- Number: 1;
- Filter change period: 300 hrs;
- Oil specifications (see pag.16)

Cooling system

- Type and detail: air cooling with axial blower;
- No. of fan blade : 6;
- Diameter : 229 mm;
- Type of temperature control: none.

Starting system

- Safety device: Preventing engine start on the clutch pedal
- Make: MAGNETI MARELLI;
- Model: MT 68 PA 3.5/12 011;
- Type: electromagnetic engagement;
- Power: 3 kW for start motor rating;
- Starting system for low temperatures: thermostarter(opt.).

Electrical equipement

- Voltage: 12 V;
- Generator
  . Make: MAGNETI MARELLI;
  . Type: alternator AA 108 - 14V - 33A;
  . Power: 460 W;
- Battery : 1 lead acid;
  . Capacity: 110 Ah at 20 hours rating.

Exhaust system

- Make: SAME;
- Type: 4 chambers reflection absorption;
- Model: 150.5610.2/20
- Location: on the left hand side of engine cowling, horizontally position;
- Height of outlet above ground: 435 mm.

TRANSMISSION

Clutch: utilized only for travelling of tractor
- Make: SAME;
- Type : single disc dry clutch;
- Model: 463.22;
- Disc diameter: 250 mm;
- Control system: hydraulically operated by pedal self readjusting.

Gear box

- Make: SAME;
- Type: mechanical syncromesh speed change gear with 4 speeds forward, 1 reverse speed and 3 group speed;
- Model: 463.31;
- No. speeds: 12 forward and 3 reverse;
- Available options: 16 forward and 3 reverse.

Rear axle and final drives

- Make: SAME;
- Type: bevel gear differential and side final drive;
- Model: 463.44;
- Differential lock: yes;
- Type: mechanical;
- Model: SAME;
- Control system: engaged or disengaged with pedal.

Front axle and final drive

- Make: SAME;
- Type: 463.43;
- Model: original SAME system with central shaft bevel gear drive, differential and side final drive;
- Differential lock: yes;
  - Type: mechanical;
  - Model: SAME;
  - Method of engagement: with pedal;
  - Metod of disengagement: with pedal.

Transmission lubrication

- Oil capacity
  - Gear box, rear axle, final drive,power lift and hydraulic system: in common, total capacity filter including 39.7 l;
  - Change period: 1200 hrs;
  - Filter change period: when the filter clogging warning lamp is lighted;
  - Front axle and final drive: total capacity 6 l;
  - Changing: 1200 hrs;
- Recommended oil: see pag.16.

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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 2200 rev/min
FORWARD			
1	S	582.10	0.91
2	S	342.90	1.54
3	S	256.80	2.06
4	S	155.93	3.40
1	N	194.03	2.73
2	N	114.29	4.64
3	N	85.59	6.20
4	N	51.88	10.21
1	F	64.68	8.20
2	F	38.10	13.93
3	F	28.54	18.60
4	F	17.32	30.63
REVERSE			
1	S	292.48	1.81
2	N	97.50	5.44
3	V	32.50	16.33

- Tyre size 14.9/28 inflaction pressure: 1.3 bar
- Tyre radius index: 640 mm (E.T.R.T.O. norm).

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 wet clutch 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 14.9/28: 610 mm;
- Distance from the median plane of the tractor 0 mm;
- Distance behind rear axle: 260 mm;
- PTO speed: 613 rev/min at rated engine speed;
- Engine speed: 1937 rev/min at standard power take-off speed 540 rpm;
- Ratio of rotation speeds (engine speed/p.t.o. speed): 3.587;
- Max power and torque trasmissible: 66.2 kW and 105.3 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: 6 in conformity with "ISO Standard 500 - 1979";
- Height above ground with tyre size 14.9/28: 610 mm;
- Distance from the median plane of the tractor 0 mm;
- Distance behind rear axle: 260 mm;
- PTO speed at rated engine speed: 996 rev/min
- Engine speed 2208 rev/min at standard power take-off speed: 1000 rpm;
- Ratio of rotation speeds (engine speed/p.t.o. speed): 2.2083;
- Direction of rotation (viewed facing driving end): clockwise.

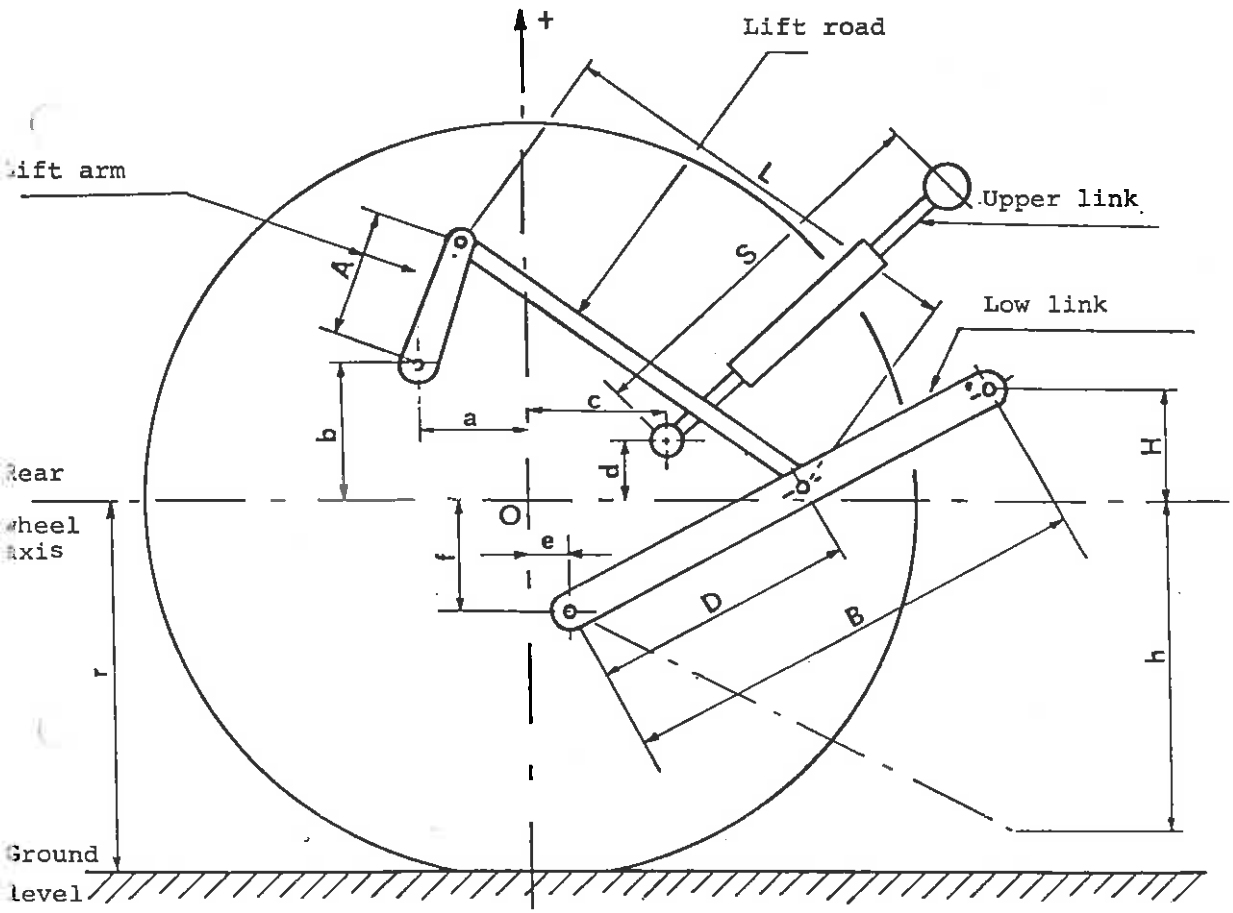
POWER LIFT

- Make: MITA;
- Type: M 55 closed centre system;
- Type and number of cylinders: 1 internal hydraulic jack 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: 200 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: 39.7 l in common with gear box;
- Site of oil reservoir: gear box;
- Position and No.of additional oil plugs: 2 ways distributor at rear of tractor;
- Maximum volume of oil available to external cylinders: 15 l;
- Recommended oil (see pag.16).

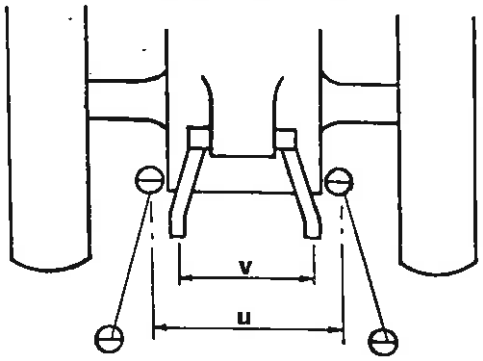
Three-point linkage

- Category: 1 in conformity with ISO 730/I;

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Rear weel axis



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Specify the settings for the lifting test

Front tyres (size 11.2/20) (*)		(r)	640 mm
Rear tyre (size 14.9/28) (*)		(r')	465 mm
Length of lift arms		(A)	235 mm
Length of lower links		(B)	850 mm
Distance of lift arm pivot point from rear wheel centre line	:horizontally	(a)	50 mm
	:vertically	(b	355 mm
Horizontally distance between the 2 lower link points		(u)	430 mm
Horizontally distance between the 2 lift arm end points		(v)	530 mm
Length of upper link		(S)	from 530 to 800 mm
Distance of upper link pivot point from rear wheel centre line	horizontally	(c)	270 mm
	vertically	(d)	300 mm
Distance of lower link pivot point from rear wheel centre	horizontally	(e)	10 mm
	vertically	(f)	115 mm
Distance of lower link pivot points to lift rod pivot points on lower link		(D)	430 mm
Length of lift rods		(L)	520 mm
Height of lower hitch points:			
- in Low position		(h)	435 mm
- in High position relative to the rear wheel centre line, situated 640 mm above the ground level		(H)	175 mm

(*) Front Tyres in accordance with E.R.T.R.O. norm
(*) Rear Tyres in accordance with C.U.N.A. norm

SWINGING DRAWBAR: none

TRAILER HITCH

- Type: SAME;
- Height above ground: 480 - 530 - 745 mm;
- Distance of hitch point from rear axle axis, horizontally: 375 mm;
- Distance of hitch point from power take-off shaft end:
  . vertically: behind 145 - 95 mm above 120 mm;
  . horizontally: 150 mm;
- Maximun vertical permissible load: 1363 daN.
- Diameter of pinhole: 28.5 mm.

HOLED DRAWBAR

- Number of holes: 7;
- Distance between holes: 100 mm;
- Hole diameter: 28.5 mm;
- Thickeness/width of the drawbar: 30 - 80 mm;
- Height above ground , minimum 200 mm;
  maximum 840 mm;
- Horizontal distance to power take-off shaft end (rear) 600 mm.
- Diameter of pin hole: 28 mm.

STEERING

- Specifications: hydrostatic steering whit BOSCH hydraulic gear pump HY/ZFS 11/11 L 214.
  Two rams at simple effect acting directly on front axle;
- Make: DANFOSS;
- Model: ORBITROLL;
- Type: OSPC 80 ON;
- Working pressure: 120 bar;
- Oil capacity: 39.7 l in common with gear box;
- Oil change period: 1200 hrs;
- Filter change period: when the filter clogging warning lamp is lighted;
- Recommended oil (see pag.16).

BRAKE

Service brake
- Make: SAME;
- Model: 463.54;
- Type: oil bath disc, total 8 discs, mounted before 2 rear differential half schafts.
  .rear disc dia=290 mm
  FRENDO HDT 303 lining material;
- Method of operation: hydraulically acting with 2 pedals;
- Trailer braking take-off: none.

Parking brake
- Type: fully indipendent by service brake, 8 oil bath discs mounted on the pinion shaft in the gear box
  FRENDO HOT 303 lining material;
- Method of operation: mechanically by hand lever.
- Trailer braking take-off: none

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

STEERING WHEELS

- Number: 2;
- Location: at front;
- Tyres: radial;
  . Size: 11.2/20;
  . Ply rating: 6;
  . Maximum permissible load on each tyre: 932 daN;
  . Corresponding inflation pressure: 1.8 bar;
- Track widths: 1350-1450-1550 mm;
- Regulation: changing the position of the rims in respect of the disc.

DRIVING WHEELS

- Number: 4;
- Location: 2 at front and 2 at rear;
- Tyres:
  . Size: 14.9/28;
  . Ply rating: 6
  . Type of casing: radial;
  . Maximum permissible load on each tyre: 1579 daN;
  . Corresponding inflation pressure: 1.4 bar;
- Track widths: 1360-1460-1560-1760-1860 mm;
- Regulation: changing the position of the rims in respect of the disc.

WHEELBASE: 2085 mm.

PROTECTIVE STRUCTURE

Specifications

- OECD approval number: CSD 01030/11;
- Trade name: SAME T 47;
- Manifacturer's name: SAME TRATTORI S.p.A.;
- Protective device: frame.

Materials used in the construction and dimensions

See OECD Test Report on Protective Stuctures.

DRIVER'S SEAT

- Make: BOSTROM;
- Model: BALTIC;
- Type of suspension: 84604-AX upholstered seat with back rest;
- Type of damping: shock absorber;
- Range of adjustment, longitudinal 150 mm;
  vertical 60 mm.

LIGHTING

Lighting system in accordance with CEE 78/933

	Height above ground of centre with tyre (1) mm	Size mm	Distance from out side edge of trac tor to centre at 1460 mm track width mm
Headligths	910	dia 120	780
Front park.lights	1415	110*35	300
Front finger post	1450	110*35	300
Rear park.lights	1450	50*60	295
Rear finger post	1450	50*60	245
Stop	1450	50*60	345
Reflectors	1020	dia 80	400

(1) Tyre size: 11.2/20 front - 14.9/28 rear.

TEST CONDITIONS

- Overall dimensions with tyres:
- Front 11.2/20 - Rear 14.9/28

	Length (mm)	Width (mm) min	Width (mm) max	Height (mm) at top of exaust sil.	Height (mm) at top of protec.struc.
Without ballast	3440	1760	2260	---	2350
With ballast	3550	1760	2260	---	2348

Ground clearance

- Clearance limiting part: 330 mm.

Track setting

- Front: 1450 mm;
- Rear: 1460 mm;

Tractor mass (without driver but with thanks full with frame);

	Units	Front	Rear	Total
Without ballast	kg	980	1320	2300
With ballast	kg	1080	1320	2400

BALLAST: front axle, ballast of 50 Kg.

	ballast(n)	total weight (Kg)	water (Kg)
front	2	100	-
rear	-	-	-
additional	-	-	-

Fuel and lubricants recommended and used in tests
all in accordance with API NORM

Fuel

Type: AGIP Diesel, DIN 51601;
Specific gravity at 15 °C: 0.840 kg/l;

Engine oil
- Type: AGIP DIESEL SIGMA S SAE 30;
- Viscosity: 12.5 cSt;
- API: SE-CD.

Transmission oils and rear, front axle and final drive oils;
- Type: AGIP ROTRA THT;
- Viscosity: 11.5 cSt;
- Viscosity index: 95;
- API: GL-3.

Power lift oil
- Type: AGIP ROTRA THT;
- Viscosity: 11.5 cSt;
- API: GL-3.

Steering oil
- Type: AGIP ROTRA THT;
- Viscosity: 11.5 cSt;
- API: GL-3.

Recommended grease: AGIP GREASE 30;
- Number of lubrication points: 11.

II - TEST RESULTS

A. COMPULSORY TESTS RESULTS

1) MAIN POWER TAKE-OFF PERFORMANCE

- Date and location of test: 03 th Sept.1987 - 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	KWh/l
MAXIMUM POWER - 2 - HOUR TEST						
30.10	2208	616	9.45	7.94	264	3.18
POWER AT RATED ENGINE SPEED						
30.10	2208	616	9.45	7.94	264	3.18
STANDARD POWER TAKE-OFF SPEED (540+/-10 REV/MIN)						
27.40	1946	542	8.12	6.82	248	3.38
PART LOADS						
i) torque corresponding to maximum power at rated engine speed						
30.10	2208	616	9.45	7.94	264	3.18
ii) 85% of torque obtained in i)						
26.70	2290	638	8.73	7.33	275,	3.06
iii) 75% of torque definited in ii)						
20.30	2318	646	7.02	5.89	290	2.89
iv) 50% of torque defined in ii)						
13.70	2338	652	5.32	4.47	325	2.58
v) 25% of torque defined in ii)						
7.00	2352	656	3.92	3.29	470	1.79
vi) unloaded						
0	2372	661	2.65	2.23	0	0

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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	kWh/l
i) The torque corresponding to maximum power available						
27.40	1946	542	8.12	6.82	248	3.38
ii) 85% of torque obtained at maximum power						
24.40	2019	563	7.47	6.27	257	3.26
iii) 75% of torque defined in ii)						
18.60	2047	571	5.87	4.93	265	3.17
iv) 50% of torque defined in ii)						
12.60	2069	577	4.54	3.81	303	2.77
v) 25% of torque defined in ii)						
6.40	2092	583	3.16	2.65	416	2.02
vi) unload						
-	2100	585	2.49	2.09	-	-

STANDARD SPECIFIC FUEL CONSUMPTION: 275/325/257/303 g/kWh

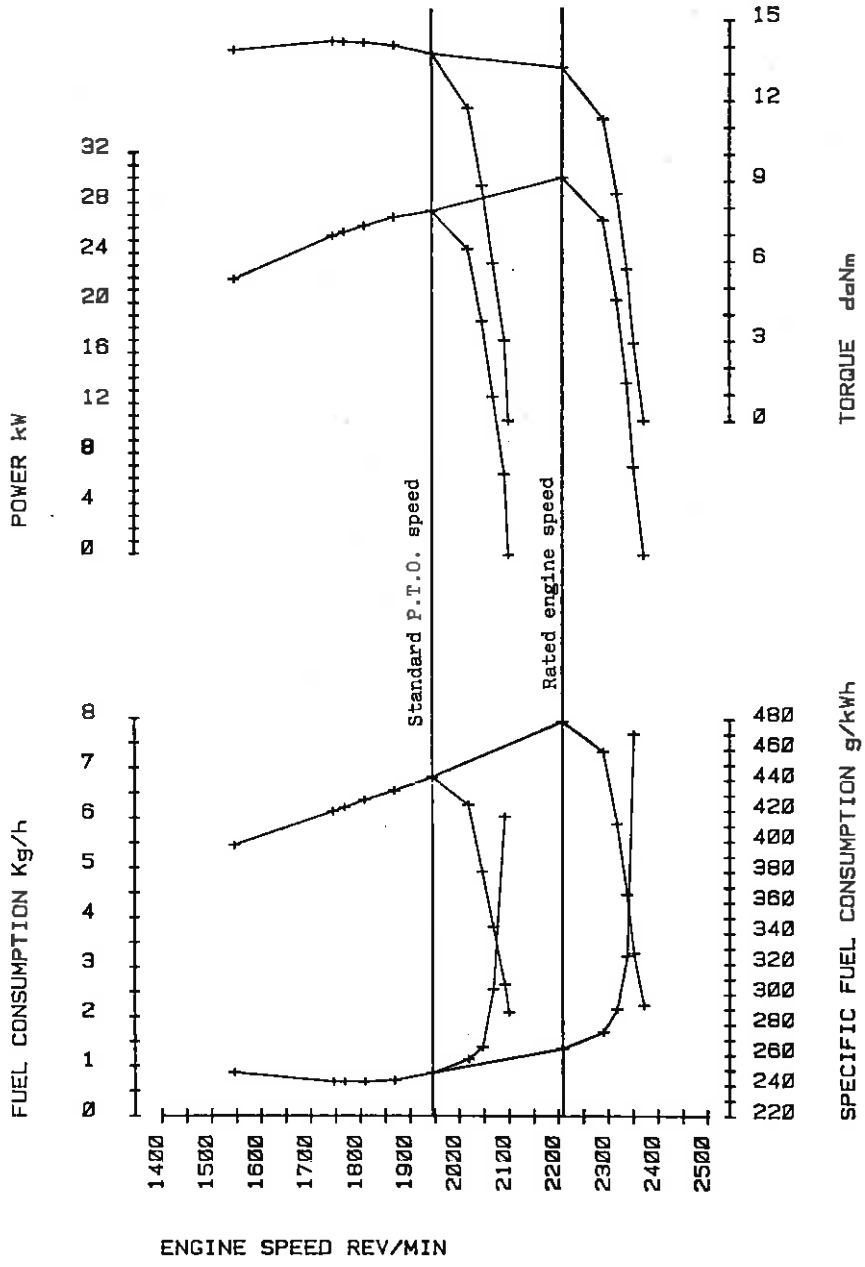
- No load maximum engine speed: 2372 rev/min
- Torque (1) at maximum power: 13.20 daNm
- Maximum torque (1) (engine speed: 1745 rev/min):14.10 daNm
- Mean atmospheric conditions : Temperature 24°C
  Pressure 990 mbar
  Relat.humidity 85%
- Maximum temperatures : Coolant 97°C
  Engine oil 126°C
  Fuel 36°C
  Engine air intake 34°C

(1) The torque is the equivalent crankshaft torque.

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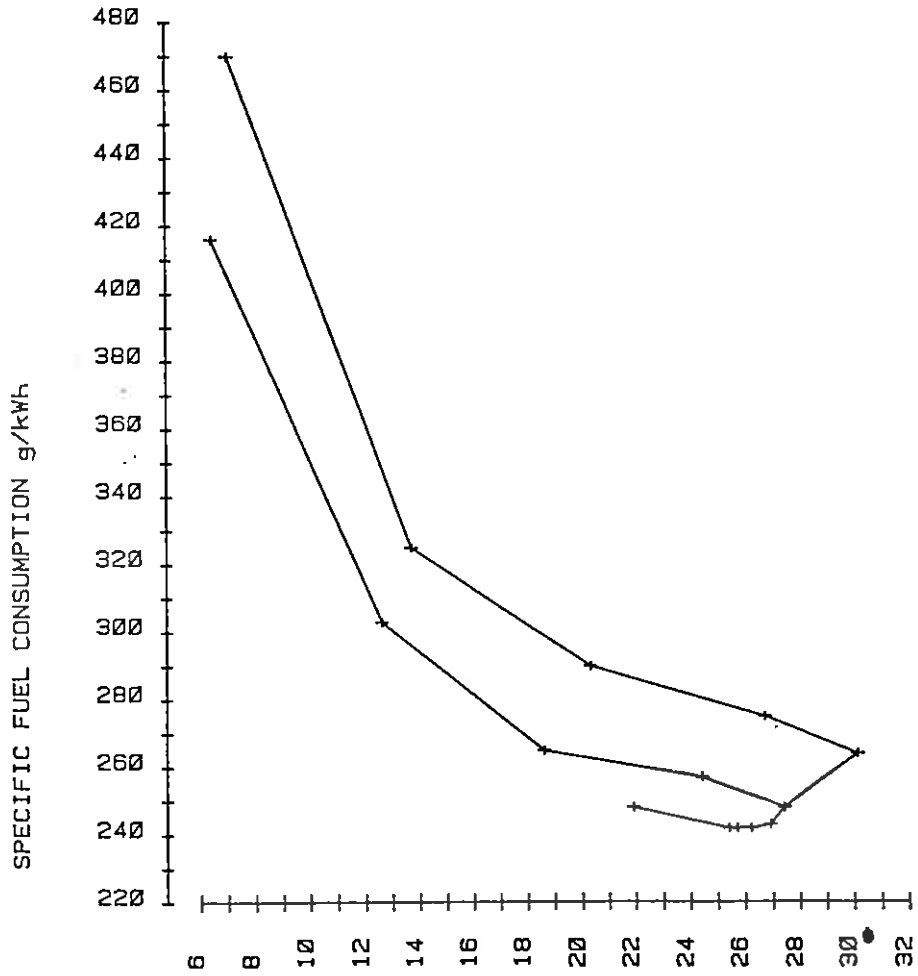
p. t. o. PERFORMANCE



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p. t. o. PERFORMANCE



p. t. o. POWER kW

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(2) POWER LIFT AND HYDRAULIC POWER TEST

- Date and location of tests: 07 th sept. 1987 - 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	610	690
Maximum corrected force exerted through full range	daN	1648	1178
Corresponding pressure of hydraulic fluid	bar	179	179
Moment about rear axle	daNm	1417	1732
Maximum tilt angle of mast over range of lift	Degrees	--	-4

Lifting heights relative to the horizontal lower links

mm	-320	-300	-200	-100	0	100	200	290	300	370
Lifting forces at hitch points										
daN	1648	1667	1741	1815	1913	1923	1910	1864	---	---
Lifting forces at test frame										
daN	1901	1874	1864	1790	1697	1599	1462	---	1256	1178

HYDRAULIC POWER TEST

Sustained pressure with relief valve open: 194 bar;
Pump delivery rate at min pressure: 28.5 l/min;

Hydraulic power	kW	flow rate l/min	pressure bar	oil temp. °C
At 90% of the actual reliev valve setting	7.58	26.0	175	62
Maximum	7.58	26.0	175	62

Tapping point used for test : at rear of tractor
Hydraulic fluid: see pag.16.

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

- Date of tests: 08/09/1987
- Type of track: concrete
- Type and size of tyres front: 11.2/20 6 plr
  rear : 14.9/28 6 plr

Height drawbar above ground : 452 mm
Tyre inflation pressure : front 1.8 bar
rear 1.4 bar

1) MAXIMUM DRAWBAR IN TESTED GEARS (Unballasted tractor)

Gear	Pow.	Draw. pull	Speed	Engine speed	Slip of wheel	Specific ener.cons.	fuel	Temperat. cool.	eng.	temp.	Atm. condit. hum.	pres.
n.	kW	daN	km/h	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mbar
2S	6.30	1643	1.38	2348	15.0	1.29	652	28	58	96	17	71	997
3S	8.30	1644	1.82	2325	15.0	1.31	641	28	58	97	18	71	997
1N	10.78	1638	2.37	2293	15.0	1.37	610	28	58	99	18	71	997
4S	13.27	1631	2.93	2273	15.0	1.53	549	28	58	99	18	71	997
2N	17.70	1618	3.94	2247	15.0	1.99	422	29	58	100	19	71	998
3N	22.94	1592	5.19	2221	15.0	2.43	345	29	59	101	20	71	99
1F	25.16	1269	7.14	2204	11.0	2.69	312	30	60	101	20	71	99
4N	27.71	1072	9.31	2201	6.5	2.97	283	30	61	103	21	70	998
2F	25.97	726	12.88	2200	5.0	2.77	303	30	61	103	21	70	998

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ii)MAXIMUM POWER (ballasted)
. height of drawbar above ground: 452 mm.
. tyres inflation pressure: 1.4 bar at rear
1.8 bar at front.

Gear	Pow.	Draw. pull	Speed	Engine speed	Slip of wheel	Specific ener.cons.	fuel	Temperat. cool.eng.		Atm. condit. temp.	hum.	pres.
n.	kW	daN	km/h	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mbar
1S	3.93	1474	0.81	2366	15.0	1.08	781	27	56	94	17	66	995
2S	6.72	1767	1.37	2351	15.0	1.36	616	27	56	95	18	66	995
3S	8.99	1788	1.81	2328	15.0	1.41	594	27	57	95	18	66	995
1N	11.60	1778	2.35	2291	15.0	1.48	567	28	57	97	18	66	995
4S	14.29	1775	2.90	2274	15.0	1.65	509	29	57	98	18	66	996
2N	19.24	1772	3.91	2246	15.0	2.16	388	29	58	100	19	67	996
3N	24.24	1682	5.19	2223	14.5	2.56	328	30	58	100	19	67	996
1F	25.07	1254	7.20	2207	9.0	2.67	315	30	59	102	19	67	996
4N	27.78	1090	9.18	2202	7.0	2.96	284	31	60	103	19	67	996
2F	25.96	745	12.55	2199	6.5	2.75	305	31	60	103	20	67	996

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

Gear	Pow.	Draw. pull	Speed	Engine speed	Slip of wheel	Specific ener.cons.		Temperat. fuel	cool.eng.	Atm.condit. temp.	hum.	pres
n.	kW	daN	km/h	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mbar
iii) FIVE HOUR TEST at 75% of pull at maximum power: gear 1F													
1F	20.43	942	7.81	2276	4	2.34	358	36	64	104	23	72	998
iv) FIVE HOUR TEST at pull corresponding to 15% wheel slip in test ii)													
2N	17.76	1477	4.33	2214	-	-	-	36	65	105	24	70	998

- Test (iv) was carried out with additional ballast, the figures not quoted are therefore irrilevant.
- Total oil consumption in the first five hours: 260 g
- Total oil consumption in the second five hours: 270 g
- Hourly consumption: 53 g/h.

4 - TURNING CIRCLE AND TURNING SPACE

Wheel equipment front: 11.2/20 6 ply
rear: 14.9/28 6 ply

Track of wheel front: 1450 mm
rear: 1460 mm

	with brakes on rear wheels right (m)	left (m)	without brakes right (m)	left (m)
rad. turn space	3.06	3.13	4.36	4.46
rad. turn circle	3.00	3.07	4.30	4.40

5 - LOCATION OF CENTRE OF GRAVITY

Height above ground ..... 785 mm
Distance forward from rear axle centre .... 888 mm
Distance from tractor's median plane ..... 0 mm

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

6 - BRAKING PERFORMANCE
(Tractor with brakes on rear wheels)
Date of test: 28.06.1987
Type of track: concrete
Type of accelerometer: PEISELER

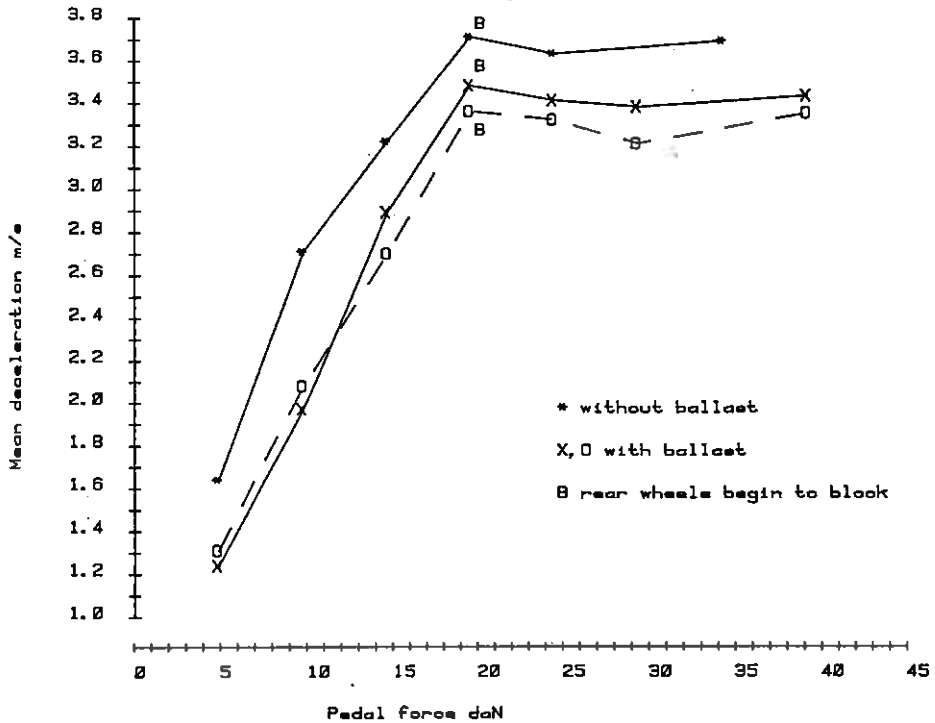
Maximum weight tecnically permissible of the tractor with ballast (*)

	front axle (kg)	rear axle (kg)	total (kg)
unballasted	990	1400	2390
ballasted	1210	2670	3880

(*) Tractor carrying a driver, a responsable for monitoring and the decelerometer.

A1) SERVICE BRAKES (rear wheel braked - four wheels drive)

Type - 0 - test (cold brake) _____ type - I - (fade) test -----



Middle speed of beginning braking (unballasted tractor): 33.00 km/h
Middle speed of beginning braking (ballasted tractor) : 32.80 km/h
The heating of brakes has been make to drag the tractor braking for one km.

Comment and vibration: none.

B) PARKING BRAKE

	ballasted tractor on 18% slope		unballasted tractor with trailer of 3000 k on 12% slope	
	slope	descend	slope	descend
pull on handbrake daN	6.5	5.5	11.5	10.5

7 - MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 07.09.1987
Type of sound level meter: 2209 Brüel & Kjaer
Type of track: concrete
Safety frame: SAME T47

Result of test

N.gear used: 4F
Travelling speed: 24.35 km/h
Sound level: 86.9 dB(A)

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

8 - NOISE MEASUREMENT AT THE DRIVER'S EAR LEVEL

Date of test: 09.09.1987
Type of sound level meter: 2209 B&K
Type of track: concrete
Safety frame: SAME T47

gear	drawbar pull at which the tractor develops the max sound level (daN)	travelling speed (km/h)	sound level dB(A)	
1S	1800	0.80	92.0	
2S	1650	1.50	91.5	
3S	1600	1.90	92.0	
1N	1600	2.50	92.0	
4S	1500	3.01	92.0	
2N	1500	4.50	93.0	
3N	1400	6.00	93.0	
1F	0	8.80	92.0	*
1F	1100	8.30	93.0	
4N	900	10.30	94.0	
2F	600	14.30	94.5	
3F	0	20.00	94.8	°
3F	400	19.50	95.0	
4F	0	33.10	93.0	#
4F	200	31.40	93.5	

(°) - Noiset speed.
(*) - Gear whit nominal travelling speed nearest to 7.5 km/h
(#) - Max forward speed gear.

ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

SAME SOLAR 50 DT "4WD" TEST 035 29

REMARKS: none

TEST CARRIED OUT BY
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THE DIRECTOR OF TESTING STATION
(Prof.Giuseppe COLZANI)

HEAD OF ISMA - ROMA
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