ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO

O.E.C.D. n.1090

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

Report on test of: LAMBORGHINI 874 90 DT "4WD"



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

Date of approval O.E.C.D.: 18.09.1987

Period of test: Feb - May 1987

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

TEST n.033

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All stated dimension and tests referred to tyre size 14.9/24 (6plr) at front and 16.9/34 (6plr) at rear, as well as to track whiths 1700 mm at front and 1700 mm at rear.

- Tractor manufacturer's: TRATTORI LAMBORGHINI 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: LAMBORGHINI;
- Model : 874-90 DT "4WD";
- Type: Wheeled tractor, unit constr., all wheels drive tractor;
- Serial no: 10199;
- First serial no.:10001.

ENGINE

- Make: LAMBORGHINI;
- Model: 1000.4 W t;
- Type : Watercooled 4 stroke Diesel engine direct injection turbo surcharged;
- Serial n.: 10215.

Cylinders

- Number/disposition: 4 vertical in line;
- Bore/stroke: 105/115.5 mm;
- Capacity: 4000 cc;
- Compression ratio: 17.1/1;
- Arrangement of valves: Overhead;
- Cylinder liners: wet liners.

Supercharging

Make: KKK;
Model: K 26-2664 GA/10/11;
Type: Turbocharger;
Supercharging pressure: 0.75 bar.

Fuel system

- Fuel feed system: AC corone fuel feed pump;
- Make, type and model of fuel filter: FIAMM FNA 160;
- Capacity of fuel tank: 100 l;

- Make, type and model of injection pump: BOSCH PFR 1K 90 A 472, immersed pump one for cylinder whitout serial number, in line injection pump.
- Manufacturer's production setting of injection pump:
  . flow rate 59 ± 2 mm3/stroke at rated speed and full load;
  . timing 18 ± 0.5 .before TDC;
- Make, type and model of injectors:BOSCH DLLA 150 S 925 multihole injection nozzles;
- Injection pressure: 180 ± 15 bar.

Governor

- Make: LAMBORGHINI;
- Type: mechanical variable speed;
- Model: 089.1652.4;
- Governor range of engine speed from 700 to 2670 rev/min;
- Rated engine speed : 2500 rev/min.

Air Cleaner

- Main filter
  . Make: DONALDSON;
  . Type: Dry paper element filter;
  . Model: 08-11242;
  . 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: 9.2 l;
- Oil change period : 125 hrs;
- Type of filter : FIAMM 4803 IN;
- Number: 1;
- Filter change period: 300 hrs;
- Oil specifications (see pag.15)

Cooling system

- Type and detail: water cooling with impeller pump model 082.1740.4, over pressure valve set to 0.4 bar;
- No. of fan blade : 4 driven from engine shaft;
- Diameter : 400;
- Coolant capacity: 11 l.
- Type of temperature control: electrical indicator.

Starting system

- Safety device: Preventing engine start in gear;
- Make: BOSCH;
- Model: JF 12 V;
- Type: electromagnetic engagement;
- 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: 770 W - 45 A;
- Battery : 1 lead acid;
  . Capacity: 110 Ah at 20 hours.

Exhaust system

- Make: LAMBORGHINI;
- Type: 4 chambers reflection absorption;
- Model: 250.5630.2;
- Location: on the left hand side of engine cowling, vertical position;
- Height of outlet above ground: 2630 mm.

TRANSMISSION

Clutch: utilized only for travelling of tractor
- Make: LAMBORGHINI;
- Type : single disc dry clutch;
- Model: 448.23;
- Disc diameter: 280 mm;
- Control system: hydraulically operated by pedal self readjusting.

Gear box

- Make: LAMBORGHINI;
- Type: mechanical syncromesh speed change gear with 4 speeds forward, with 3 ranges speed and 1 miniriductor group and 1 reverse group;
- Model: 448.31;
- No. speeds: 24 forward and 12 reverse;
- Available options: 12 forward and 12 reverse or 16 forward and 16 reverse or 20 forward and 20 reverse.

Rear axle and final drives

- Make: LAMBORGHINI;
- Type: bevel gear differential and epicyclic final drive;
- Model: 448.44;
- Differential lock: yes;
- Type: LAMBORGHINI;
- Model: mechanical;
- Control system: engaged or disengaged with pedal.

Front axle and final drive

- Make: LAMBORGHINI;
- Type: 448.43;
- Model: original LAMBORGHINI system with central shaft bevel gear drive, differential and epicyclic final drive;
- Differential lock: yes;
  - Type: LAMBORGHINI;
  - Model: mechanical;
  - 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 45 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 2500 rev/min
FORWARD			
1	S m	651.897	1.077
1	S	551.744	1.272
2	S m	489.973	1.433
2	S	414.696	1.693
3	S m	400.301	1.754
3	S	338.801	2.072
4	S m	279.845	2.509
4	S	236.851	2.964
1	N m	204.681	3.430
1	N	173.235	4.053
2	N m	153.841	4.564
2	N	130.206	5.392
3	N m	125.686	5.586
3	N	106.376	6.600
4	N m	87.865	7.991
4	N	74.366	9.442
1	F m	67.605	10.386
1	F	57.218	12.272
2	F m	50.813	13.818
2	F	43.006	16.327
3	F m	41.513	16.914
3	F	35.135	19.958
4	F m	29.021	24.195
4	F	24.562	28.587
REVERSE			
1	S	529.828	1.325
2	S	398.224	1.763
3	S	325.346	2.158
4	S	227.443	3.087
1	N	166.354	4.221
2	N	125.034	5.615
3	N	102.150	6.874
4	N	71.412	9.832
1	F	54.946	12.779
2	F	41.298	17.002
3	F	33.739	20.812
4	F	23.587	29.769

- Tyre size 16.9/34 inflaction pressure: 1.3 bar
- Tyre radius index: 745 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 16.9/34: 760 mm;
- Distance from the median plane of the tractor 0 mm;
- Distance behind rear axle: 380 mm;
- PTO speed: 614 rev/min at rated engine speed;
- Engine speed: 2198 rev/min at standard power take-off speed 540 rpm;
- Ratio of rotation speeds (engine speed/p.t.o. speed): 4.071;
- Max power and torque trasmissible: 95 kW and 144.5 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 16.9/34: 760 mm;
- Distance from the median plane of the tractor 0 mm;
- Distance behind rear axle: 380 mm;
- PTO speed at rated engine speed: 1020 rev/min
- Engine speed 2450 rev/min at standard power take-off speed: 1000 rpm;
- Ratio of rotation speeds (engine speed/p.t.o. speed): 2.450;
- Direction of rotation (viewed facing driving end): clockwise.

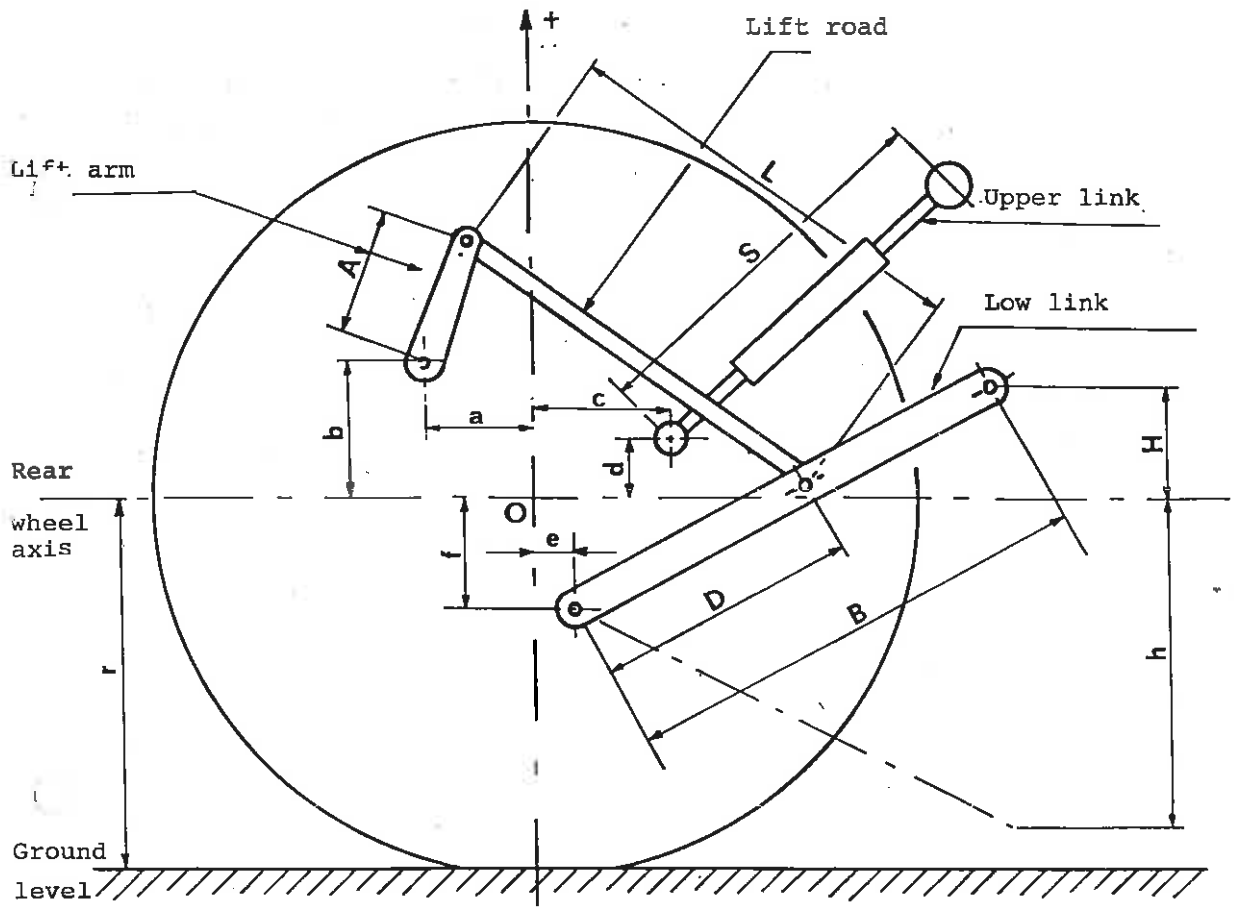
POWER LIFT

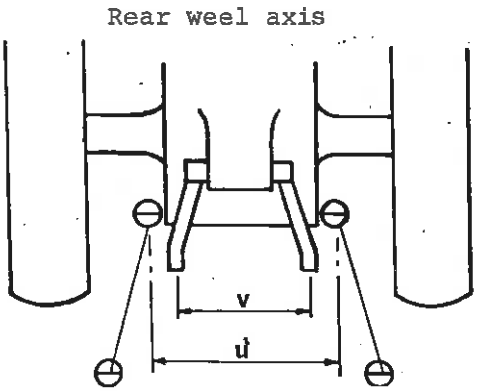
- Make: LAMBORGHINI;
- Type: LOAD SENSING open centre system;
- Type and number of cylinders: 1 at simple effect;
- Type of locking for the transport: mechanical, with screwed tie rods that lock the lower links;
- Exercise valve pressure: 153 bar;
- Opening pressure anti-shock valve: 183 bar;
- Lift 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: 45 l in common with gear box;
- Site of oil reservoir: gear box;
- Position and No.of additional oil plugs: 3 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: 2 in conformity with ISO 730/I;

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Specify the settings for the lifting test

Rear tyres (size 16.9/34)	(r)	745 mm
Front tyre (size 14.9/24)	(r')	590 mm
Length of lift arms	(A)	280 mm
Length of lower links	(B)	860 mm
Distance of lift arm :horizontally	(a)	95 mm
pivot point from rear :vertically	(b	400 mm
wheel centre line		
Horizontally distance between the 2 lower link points	(u)	510 mm
Horizontally distance between the 2 lift arm end points	(v)	580 mm
Length of upper link	(S)	from 500 to 770 mm
Distance of upper link horizontally	(c)	355 mm
pivot point from rear vertically	(d)	305 mm
wheel centre line		
Distance of lower link horizontally	(e)	150 mm
pivot point from rear vertically	(f)	220 mm
wheel centre		
Distance of lower link pivot points to lift rod pivot points on lower link	(D)	420 mm
Length of lift rods	(L)	810 mm
Height of lower hitch points:		
- in Low position	(h)	545 mm
- in High position	(H)	195 mm
relative to the rear wheel centre line, situated 745 mm above the ground level		

SWINGING DRAWBAR

- Type: LAMBORGHINI 97320;
- Height above ground (tyre size:16.9/34) max 500 mm
  min 425 mm
- Type of adjustment: reversible;
- Distance of hitch point from rear axle axis, horizontally: 815 mm;
- Distance of hitch point fron power take-off shaft end
  . vertically: 283 - 358 mm below;
  . horizontally: 485 mm forward;
- Laterel adjustement (centre of clevis):
  (right hand) 270 mm;
  (left hand) 270 mm;
- Distance of pivot point from rear axle axis, horizontally: 485 mm forward;
- Diameter drawbar pin hole: 33 mm.

TRAILER HITCH

- Type: LAMBORGHINI;
- Height above ground: 500 - 630 - 760 mm;
- Distance of hitch point from rear axle axis, horizontally: 530 mm;
- Distance of hitch point from power take-off shaft end:
  . vertically: behind 240 - 110 mm above 20 mm;
  . horizontally: 150 mm;
- Maximun vertical permissible load: 1470 daN.
- Diameter of pinhole: 30 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 270 mm;
  maximum 960 mm;
- Horizontal distance to power take-off shaft end (rear) 560 mm.

STEERING

- Specifications: hydrostatic steering whit BOSCH hydraulic gear pump HY/ZFS 11/11 L 201.
  Two rams at simple effect acting directly on front axle;
- Make: DANFOS;
- Model: ORBITROLL;
- Type: OSPC 80 OR;
- Working pressure: 120 bar;
- Oil capacity: 45 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: LAMBORGHINI;
- Model: 447.54;
- 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=290 mm
  FRENDO HDT 303 lining material;
- Method of operation: hydraulically acting with 2 pedals.

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.
- 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: 14.9/24;
  . Ply rating: 6;
  . Maximum permissible load on each tyre: 1480 daN;
  . Corresponding inflation pressure: 1.4 bar;
- Track widths: 1500-1600-1700-1800-1900-2000-2100 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: 16.9/34;
  . Ply rating: 6
  . Type of casing: radial;
  . Maximum permissible load on each tyre: 1976 daN;
  . Corresponding inflation pressure: 1.3 bar;
- Track widths: 1500-1600-1700-1800-1900-2000-2100 mm;
- Regulation: changing the position of the rims in respect of the disc.

WHEELBASE: 2320 mm.

PROTECTIVE STRUCTURE

Specifications

- OECD approval number: CDS 0912/23;
- Trade name: SAME C 30;
- Manifacturer's name: SAME TRATTORI S.p.A.;
- Protective device: cab.

Materials used in the construction and dimensions

See OECD Test Report on Protective Stuctures.

DRIVER'S SEAT

- Make: BOSTROM XL;
- Type of suspension: 84422 upholstered seat with back rest;
- 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 tractor to centre at 1700 mm track width mm
Headligths	1055	110*110	820
Front park.lights	1852.5	110*35	315
Front finger post	1887.5	110*35	315
Rear park.lights	1657.5	180*35	440
Rear finger post	1697.5	90*45	395
Stop	1697.5	90*45	485
Reflectors	1465	90*60	445

Tyre size: 14.9/24 front - 16.9/34 rear.

TEST CONDITIONS

- Overall dimensions with tyres:
- Front 14.9/24 - Rear 16.9/34

	Length (mm)	Width (mm) min	Width (mm) max	Height (mm) at top of exaust sil.	Height (mm) at top of protec.struc.
Without ballast	4050	2020	2620	2630	2600
With ballast	4450	2020	2620	2625	2595

Ground clearance

- Clearance limiting part: 410 mm.

Track setting

- Front: 1700 mm;
- Rear: 1700 mm;

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

	Units	Front	Rear	Total
Without ballast	kg	1415	1980	3395
With ballast	kg	1635	2180	3815

BALLAST: front axle, ballast of 40 Kg each with svitable support; weight support 20 Kg
rear axle, rings of 50 Kg each, with 6 bolts

	ballast(n)	total weight (Kg)	water (Kg)
front	5+1 (*)	220	-
rear	2+2	200	-
additional	-	-	-

(*) front ballasted support.

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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: 0.835 kg/l;

Engine oil
- Type: AGIP DIESEL SIGMA S SAE 30;
- Viscosity: 12.5 cSt;

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

Power lift oil
- Type: AGIP ROTRA THT;
- Viscosity: 11.5 cSt;

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

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

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II - TEST RESULTS

A. COMPULSORY TESTS RESULTS

1) MAIN POWER TAKE-OFF PERFORMANCE

- Date and location of test: 03 th Mar 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						
59.77	2500	1020	17.75	14.87	249	3.43
POWER AT RATED ENGINE SPEED						
59.77	2500	1020	17.75	14.87	249	3.43
STANDARD POWER TAKE-OFF SPEED (540+/-10 REV/MIN)						
59.41	2450	1000	17.42	14.60	243	3.41
PART LOADS						
i) torque corresponding to maximum power at rated engine speed						
59.77	2500	1020	17.75	14.87	249	3.43
ii) 85% of torque obtained in i)						
52.45	2585	1055	16.23	13.60	258	3.23
iii) 75% of torque definited in ii)						
39.74	2612	1066	13.30	11.15	280	2.98
iv) 50% of torque defined in ii)						
26.74	2637	1076	10.51	8.81	329	2.54
v) 25% of torque defined in ii)						
13.46	2656	1084	7.39	6.20	459	1.81
vi) unloaded						
0	2676	1092	4.97	4.17	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						
59.41	2450	1000	17.42	14.60	243	3.41
ii) 85% of torque obtained at maximum power						
52.06	2526	1031	15.70	13.15	245	3.31
iii) 75% of torque defined in ii)						
39.54	2558	1044	12.82	10.74	271	3.08
iv) 50% of torque defined in ii)						
26.63	2585	1055	9.96	8.35	313	2.67
v) 25% of torque defined in ii)						
13.42	2605	1063	6.87	5.75	428	1.95
vi) unload						
-	2629	1073	4.41	3.69	-	-

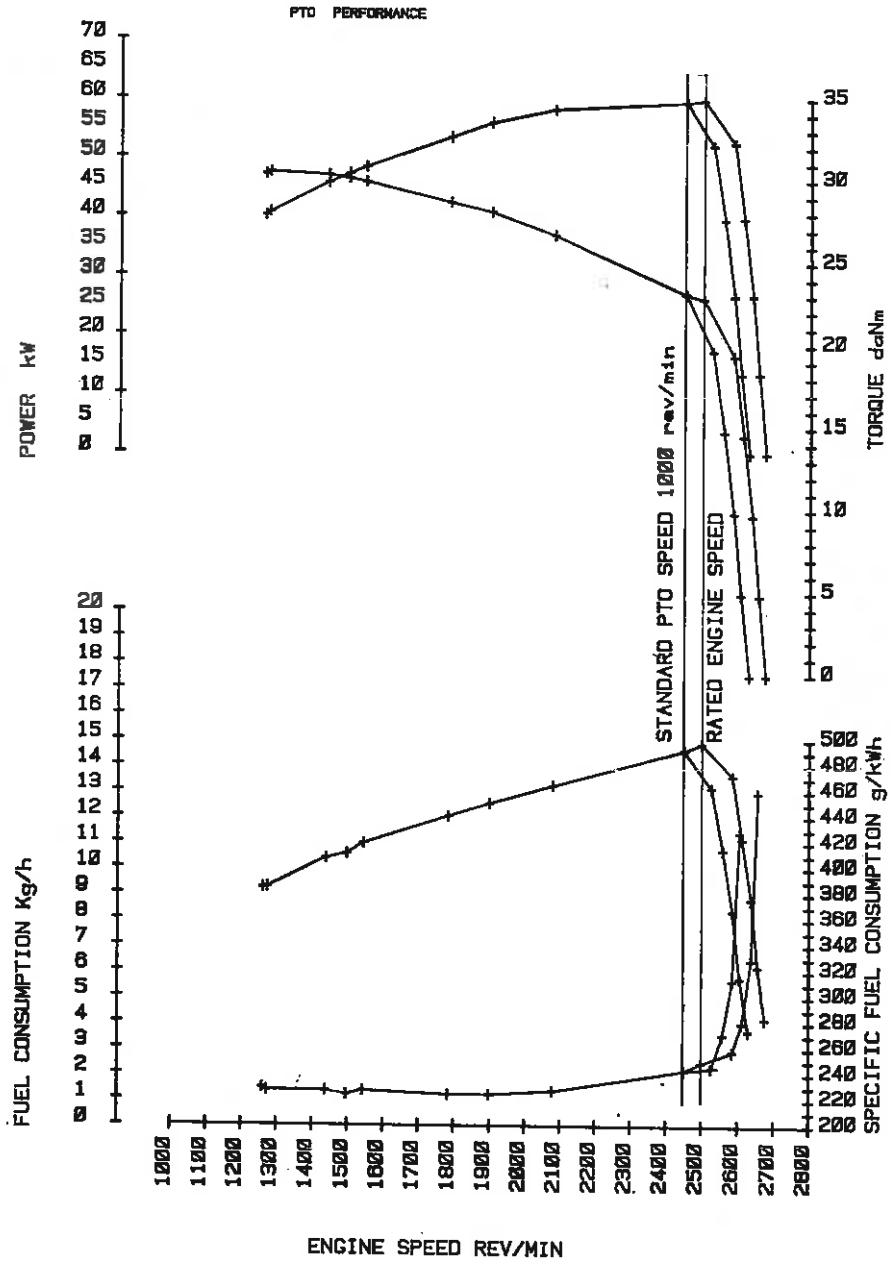
STANDARD SPECIFIC FUEL CONSUMPTION: 258/329/245/313 g/kWh

- No load maximum engine speed: 2676 rev/min
- Torque (1) at maximum power: 22.84 daNm
- Maximum torque (1) (engine speed: 1274 rev/min):30.52 dNm
- Mean atmospheric conditions : Temperature 18°C
  Pressure 975 mbar
  Relat.humidity 80%
- Maximum temperatures : Coolant 90°C
  Engine oil 110°C
  Fuel 40°C
  Engine air intake 20°C

(1) The torque is the equivalent crankshaft torque.

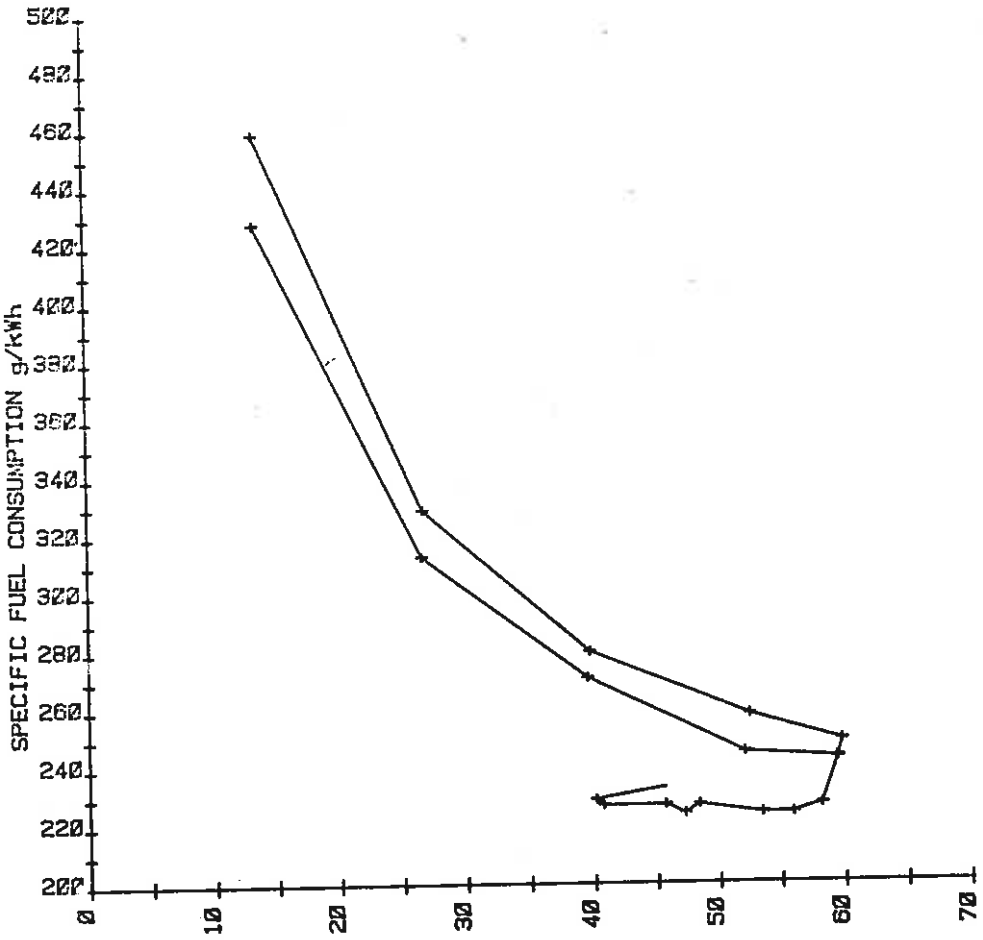
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p.t.o. PERFORMANCE



p.t.o. POWER kW

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LAMBORGHINI 874 - 90 DT "4WD" TEST 033

(2) POWER LIFT AND HYDRAULIC POWER TEST

- Date and location of tests: 07 th may 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	740	770
Maximum corrected force exerted through full range	daN	1760	1750
Corresponding pressure of hydraulic fluid	bar	171.5	171.5
Moment about rear axle	daNm	1777	2835
Maximum tilt angle of mast over range of lift	Degrees	--	-3

Lifting heights relative to the horizontal lower links

mm	-325	-300	-200	-100	0	100	200	300	415	445
Lifting forces at hitch points										
daN	1760	2162	2427	2736	2824	2833	2939	2824	1941	---
Lifting forces at test frame										
daN	1544	1941	2162	2295	2250	2286	2330	2206	---	1853

HYDRAULIC POWER TEST

Sustained pressure with relief valve open: 188.2 bar;
Pump delivery rate at min pressure: 35.8 l/min;

Hydraulic power	kW	flow rate l/min	pressure bar	oil temp. °C
At 90% of the actual reliev valve setting	7.14	25.0	171.5	65
Maximum	7.14	25.0	171.5	65

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
(UNBALLASTED TRACTOR)

- Date of tests: 11/5/1987
- Type of track: concrete.
- Type and size of tyres front: 14.9/24 6 plr
  rear : 16.9/34 6 plr

Height drawbar above ground : 500 mm
Tyre inflation pressure : front 1.4 bar
rear 1.3 bar

1) MAXIMUM DRAWBAR IN TESTED GEARS

Gear	Pow.	Draw. pull	Speed	Engine speed	Slip of wheel	Specific ener.cons.	fuel cool.	Temperat. eng.		Atm. condit. temp.	hum.	pres.
n.	kW	daN	km/h	rev/min	%	kWh/l	g/kWh	°C	°C	°C	°C	%	mbar
2Sm	10.53	2987	1.27	2564	15.0	1.00	835	24	68	95	16	66	998
2S	12.45	2992	1.50	2630	15.0	1.06	787	24	68	95	16	66	998
3Sm	12.87	2992	1.55	2622	15.0	1.06	784	24	68	95	16	66	998
3S	15.11	2992	1.82	2610	15.0	1.12	742	24	68	96	16	66	998
4Sm	18.33	3001	2.20	2602	15.0	1.17	715	25	68	96	17	65	998
4S	21.65	3011	2.59	2595	15.0	1.37	610	25	68	96	17	65	998
1Nm	24.91	3011	2.98	2585	15.0	1.56	534	25	69	97	17	65	999
1N	29.33	3019	3.50	2573	15.0	1.76	474	25	69	97	17	65	99
2Nm	32.88	3022	3.92	2560	15.0	1.97	424	25	69	98	17	66	99
2N	37.82	2955	4.61	2552	15.0	2.23	374	26	70	98	17	66	999
3Nm	38.84	2945	4.75	2539	15.0	2.24	364	26	70	99	17	66	999
3N	45.52	2746	5.97	2521	9.0	2.64	316	26	70	99	17	66	999
4Nm	48.64	2389	7.33	2509	7.3	2.75	303	26	71	99	18	65	999
4N	50.41	2045	8.88	2503	4.7	2.82	296	26	71	100	18	65	999
1Fm	51.54	1886	9.84	2502	4.0	2.89	289	26	71	100	18	65	999
1F	49.42	1503	11.84	2496	2.0	2.78	300	26	71	100	18	65	999

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ii) MAXIMUM POWER (ballasted)
. height of drawbar above ground: 495 mm.
. tyres inflation pressure: 1.3 bar at rear
1.4 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
1Sm	8.48	3217	0.95	2651	15.0	0.97	859	25	70	96	18	67	994
1S	10.09	3218	1.13	2650	15.0	1.15	772	26	70	96	18	67	994
2Sm	11.18	3223	1.25	2645	15.0	1.21	688	26	70	97	18	67	994
2S	13.44	3228	1.50	2641	15.0	1.26	662	26	70	97	20	68	994
3Sm	14.30	3325	1.55	2633	15.0	1.25	662	26	71	97	20	68	995
3S	16.13	3194	1.82	2628	15.0	1.31	663	26	71	98	20	68	995
4Sm	19.63	3214	2.20	2621	15.0	1.50	554	27	71	98	20	68	995
4S	23.11	3228	2.58	2612	15.0	1.66	500	27	71	98	21	68	995
1Nm	26.77	3248	2.97	2601	15.0	1.72	484	27	71	98	21	69	995
1N	31.14	3204	3.50	2585	15.0	1.91	437	28	71	99	21	69	995
2Nm	35.19	3243	3.91	2571	15.0	2.10	397	28	72	90	21	69	995
2N	41.22	3228	4.60	2560	15.0	2.37	350	28	72	100	21	70	995
3Nm	41.68	3188	4.71	2530	15.0	2.37	350	28	73	100	21	70	995
3N	47.18	2945	5.77	2509	11.0	2.66	312	29	73	100	21	70	995
4Nm	49.08	2428	7.28	2506	7.0	2.75	303	29	73	101	21	70	995
4N	49.63	2050	8.72	2504	5.5	2.78	299	29	73	101	21	70	995
[illegible]m	51.17	1911	9.64	2504	5.0	2.86	291	29	73	102	22	70	995
1F	50.00	1548	11.63	2503	3.0	2.81	296	29	73	102	22	70	995

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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	%	mb
iii) FIVE HOUR TEST at 75% of pull at maximum power: gear 4Nm													
4Nm	38.59	1824	7.62	2581	5	2.35	355	29	74	102	22	70	995
iv) FIVE HOUR TEST at pull corresponding to 15% wheel slip in test ii)													
3Nm	43.65	3183	4.94	2575	-	-	-	27	71	98	22	70	995

- Test (iv) was correst out with additional ballast, the figures not quoted are therefore irrilevant.
- Total oil consumption in the first five hours: 290 g
- Total oil consumption in the second five hours: 310 g
- Hourly consumption: 60 g/h.

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4 - TURNING CIRCLE AND TURNING SPACE

Wheel equipment front: 14.9/24 6 ply
rear: 16.9/34 6 ply

Track of wheel front: 1700 mm
rear: 1700 mm

	with brakes on four wheels right (m)	left (m)	without brakes right (m)	left (m)
rad. turn space	3.60	3.70	5.40	5.35
rad. turn circle	3.50	3.60	5.30	5.25

5 - LOCATION OF CENTRE OF GRAVITY

Height above ground ..... 906 mm
Distance forward from rear axle centre .... 966 mm
Distance from tractor's median plane ..... 0 mm

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6 - BRAKING PERFORMANCE

Date of test: 26.05.1987
Type of track: concrete
Type of accelerometer: PEISELER

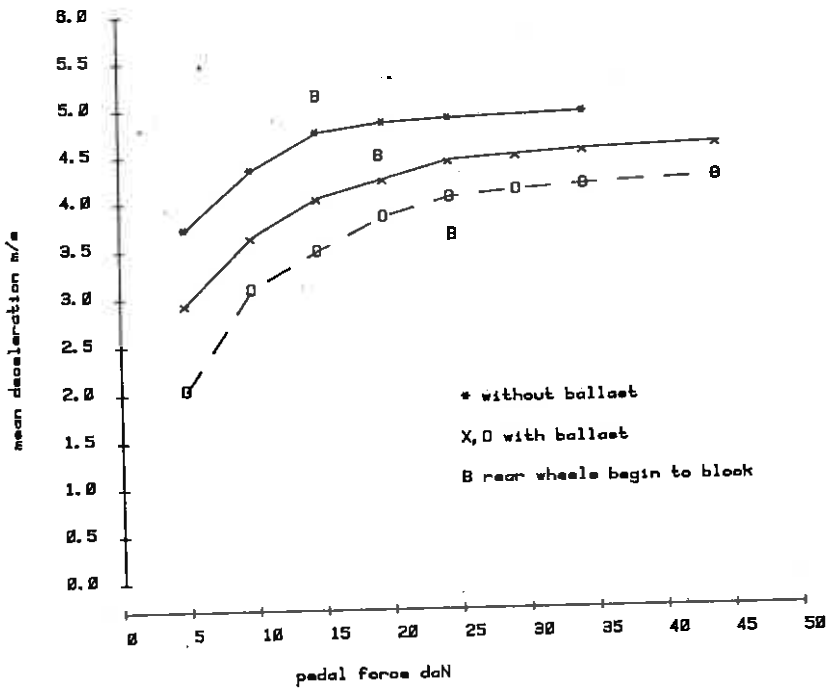
Maximum weight tecnically permissible of the tractor with ballast (*)

	front axle (kg)	rear axle (kg)	total (kg)
unballasted	1430	2045	3475
ballasted	2160	3790	5950

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

A1) SERVICE BRAKES (all wheel braked)

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



Middle speed of beginning braking (unballasted tractor): 30.10 km/h
Middle speed of beginning braking (ballasted tractor) : 29.80 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 kg on 12% slope	
pull on handbrake daN	slope 9.0	descend 9.5	slope 10.0	descend 10.5

7 - MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of test: 15.04.1987
Type of sound level meter: 2209 B&K
Type of track: concrete

Result of test

N.gear used: 4F
Travelling speed: 22.90 km/h
Sound level: 86.3 dB(A)

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8 - NOISE MEASUREMENT AT THE DRIVER'S EAR LEVEL

Date of test: 31.03.1987
Type of sound level meter: 2209 B&K
Type of track: concrete
Safety cab: SAME C30

gear	drawbar pull at which the tractor develops the max sound level (daN)	travelling speed (km/h)	sound level dB(A)	
1Sm	2354	1.00	82.0	
1S	2207	1.20	82.0	
2Sm	2256	1.30	82.5	
2S	2295	1.50	82.2	
3Sm	2403	1.65	82.8	
3S	2550	1.90	82.8	
4Sm	2550	2.30	82.5	
4S	2452	2.85	83.0	
1Nm	2305	3.20	82.5	
1N	2432	3.80	82.5	
2Nm	2648	4.20	83.5	
2N	0	5.80	82.0	
2N	2648	5.00	83.5	
3Nm	3041	5.20	82.0	
3N	2776	6.20	82.5	
4Nm	0	8.60	82.0	
4Nm	2472	7.50	82.5	*
4N	2118	9.00	83.2	
1Fm	1864	10.00	82.5	
1F	1570	12.00	82.8	
2Fm	1343	13.00	82.0	
2F	1049	16.00	82.0	
3Fm	981	17.00	82.0	
3F	814	20.00	82.0	
4Fm	686	24.50	82.5	
4F	0	30.60	82.0	
4F	392	29.90	82.5	

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

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REMARKS: none

TEST ENGINEER
(ing.Giovanni SANTORO)

THE DIRECTOR OF TESTING STATION
(prof.Giuseppe COLZANI)

HEAD OF ISMA - ROMA
(prof.Alfio CAMMILLI)

Text and graphics processed by: Ing. Giampaolo Giacometti
Tests carried out by: P.A. Giovanni Lamoratta