COMITATO PER L'OMOLOGAZIONE
DELLE MACCHINE AGRICOLE

O.E.C.D. No. 970

**REPORT ON TEST IN ACCORDANCE WITH O.E.C.D.
TEST CODE FOR AGRICULTURAL TRACTORS**

FIAT 60–66



Manufactured by: **FIAT TRATTORI S.p.A.**
Via Pico della Mirandola, 72
Modena – Italy

CENTRO DI OMOLOGAZIONE DELL'ISTITUTO DI MECCANICA AGRARIA
UNIVERSITA' DEGLI STUDI DI BOLOGNA

This bulletin is based on engineering tests in accordance with the O.E.C.D. STANDARD CODE for the Official Testing of Agricultural Tractor Performance. It does not contain an evaluation of the tractor performance on practical work.

Duration of tests: June 1983 – July 1984
IMAUBo – Istituto di Meccanica agraria dell'Università degli Studi di Bologna – Via Filippo Re n° 4 – Bologna – Italy

This report has been approved by the O.E.C.D. Coordinating Centre (CEMAGREF-France) as being in accordance with the O.E.C.D. STANDARD CODE.

Date of Approval: 27th February 1986 O.E.C.D. No. 970

In this report all performance characteristics are given corresponding to the International System of Units.

The reference to the former used Technical System of Units is given by the following relations:

Forces	1 daN	10 N	= 1,02 kp	or 1 kp	= 0,981 daN
Powers		1 kW	= 1,36 PS	or 1 PS	= 0,736 kW
Pressures		1 bar	= 1,02 kp/cm^2	or 1 kp/cm^2	= 0,981 bar

1000 mbar = 750,1 mm Hg

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The tractor FIAT 60-66 has been tested in two variants:

1) As model FIAT 60-66/20 with a speed change gear with 4 speeds and 2 gear reducers: one with 3 forward ranges (L, M, H) and 1 reverse range (R), another with 2 more forward ranges (SRL, SRM) and 1 more reverse range (RL) for 20 forward speeds totally and 8 reverse.

2) As model FIAT 60-66/12 with a speed change gear with 4 speeds and 2 gear reducers with 3 forward ranges (L, M, H) and 1 reverse gear (R) for 12 forward speeds totally and 4 reverse

Tractor manufacturer:	FIAT TRATTORI S.p.A. - Via Pico della Mirandola, 72 Modena - Italy
Submitted for test by:	Manufacturer
Selected by:	Manufacturer with agreement of Istituto di Meccanica agraria - Università degli Studi di Bologna
Place running-in:	FIAT TRATTORI S.p.A. workshop - Modena and IMAUBo - Cadriano
Duration of running-in:	Engine and tractor appr. 110 hours

SPECIFICATION OF TRACTOR

TRACTOR

Make:	FIAT TRATTORI S.p.A.
Trade name:	FIAT 60-66
Model:	60-66/20 and 60-66/12
Type:	wheeled tractor, rear wheel driven, unit construction
Serial N°:	380805
1st serial N°:	380001

ENGINE

Make:	FIAT
Model:	8035.05
Type:	4-stroke Diesel engine, direct injection, water cooled
Serial N°:	000001

Cylinders: 3, in line, bore 104 mm, stroke 115 mm, capacity 2931 cm^3, compression ratio 17/1, valves overhead, replaceable dry cylinder liners

Fuel system: forced with CORONA model APM 45 FVI pump (optionally FISPA model 4066.03/A); one wire-mesh filter on pump suction side and two filters with replaceable paper cartridges;
BOSCH rotating plunger pump model VE L 163; serial n° 17983, injection timing 6° ± 1° optionally CAV rotating plunger pump model DPS DSA 581;
manufacturer's production setting 54 ± 2 mm^3/stroke (in total 12.2 ± 0.5 l/h) at rated engine speed and full load;
BOSCH multihole injection nozzles model DLLA 136 S;
injection pressure: 23.0 ± 0.8 MPa;
capacity of fuel tank: 70 l

Governor: BOSCH centrifugal variable speed governor; optionally CAV centrifugal variable speed governor;
governed range of engine speed from 650 to 2800 rev/min

Rated engine speed: 2500 rev/min

Air cleaner: FIAT make, type 18518.212;
oil bath air filter with cyclone pre-cleaner;
oil change every 100 operating hours, no maintenance indicator;
oil capacity; 0.7 l;
air intake below bonnet

Lubrication system: FIAT
forced feed from gear pump;
sieve filter in suction and one paper cartridge replaceable filter TECNOCAR model 4648371 (optionally CARELLO model 4600875; SAVARA model 4625547; FIAAM model 4730586);
total oil capacity including filter: 7.3 l;
oil change period: 200 hrs;
recommended filter change period: 400 hrs;
recommended oil: FIAT AMBRA SUPER SAE 15W/40 or another oil conforming MIL L 2104 C or API-CD

Cooling system: water cooling with centrifugal pump and thermostatic control;
pressurized system adjusted to 70 kPa;
water capacity (added PARAFLU 11 from 20 to 50%, from -8° to -35°C) 10.0 l;
fan with 4 blades, 392 mm diameter

Starting system: safety device: operable only with engine clutch disengaged;
BOSCH solenoid pre-engaged drive starting, model JD 12 V, 3,5 kW (optionally MARELLI, model MT 68 AC);
cold starting aid with thermostart or start-pilot

Electrical system: 12 V, negative earth;
BOSCH three phase alternator model G1 14 V - 33 A-1 (optionally MARELLI, AA125 14 V - 45 A);
one lead acid battery, 88 Ah (optionally 92 Ah) at 20 hrs rating

Exaust system: own make;
multichamber-expansion type silencer;
78 mm diameter, 675 mm long;
vertical on the left hand side of bonnet;
outlet showing upwards;
height of outlet abowe ground: 2380 mm

TRANSMISSION

Clutch: LUK or VALEO make double clutch with 2 dry plates included in the same clutch pressure plate, one for p.t.o. and the other for gear box, but independently operated;
plates diameter: 280 mm;
pedal operated for gear box drive and hand lever operated for p.t.o. drive

Gear box: own make, mechanical;
syncromesh speed change gear with 4 speeds and 2 gear reducers;
one with 3 forward ranges (L,M,H) and 1 reverse range (R),
another with 2 more forward ranges (SRL, SRM) and 1 more reverse range (RL) (only at model 60-66/20);
totally 20 forward and 8 reverse speeds selected by means of 3 hand levers at model 60-66/20;
totally 12 forward and 4 reverse speeds selected by means of 2 hand levers at model 60-66/12;

Rear axle and final drives: own make;
bevel gear drive (ratio 1:4.778);
spur gear final drive (ratio 1:5.636);
differential lock, pedal operated, self disengaged

Front axle: own make;
agricultural type with hydrostatic steering trak adjustable by telescopic axles

Transmission:
capacity gear box, rear axle, power lift (commons): 40.0 l;
recommended oil change period: 1600 hrs;
type of oil filter: paper cartridge;
recommended filter change period: 400 hrs;
capacity final drives: 7.8 l;
recommended oil change period: 1600 hrs;
recommended oil: OLIO FIAT TUTELA MULTI F, SAE classification 20 W/40

Total ratios and speed (tyres 16.9 R 30)

Group	Gear No.	No. of engine revolution for one revolution of the driving wheels	Nominal travelling speed* for 2500 rev/min rated engine speed km/h
Low (crawling speeds) SRL	1 +	2025.24	0.32
	2 +	1314.46	0.50
	3 +	1073.48	0.61
	4 +	674.76	0.97
Medium (crawling speeds) SRM	1 +	867.10	0,76
	2 +	562.78	1.16
	3 +	459.61	1.43
	4 +	288.89	2.27
Low L	1	366.66	1.79
	2	237.98	2.75
	3	194.35	3.37
	4	122.16	5.36
Medium M	1	156.98	4.17
	2	101.89	6.43
	3	83.21	7.87
	4	52.30	12.52
High H	1	66.68	9.82
	2	43.28	15.13
	3	35.34	18.53
	4	22.22	29.48
Reverse (crawling speeds) RL	1 +	783.56	0.84
	2 +	508.56	1.29
	3 +	415.32	1.58
	4 +	261.06	2.51
Reverse R	1	141.86	4.62
	2	92.07	7.11
	3	75.19	8.71
	4	47.26	13.86

* Calculed with radius index: 695 mm

\+ Only at type 60-66/20

POWER TAKE-OFF

Main p.t.o.: indipendent, hand lever operated, driven by 2nd plate of dual clutch;
changing of p.t.o. speeds hand operated;
one shaft at rear tractor in median plane, 680 mm above ground;
(with tyres: at front 7.50-16, at rear 16.9 R 30)

p.t.o. proportional to engine speed:

540 rev/min
dimensions 35 mm diameter (1.3/8" conforming ISO R 500), 6 splines;
distance behind rear axle 336 mm;
p.t.o. speed at rated engine speed (2500 rev/min) 614 rev/min;
engine speed at standard p.t.o. speed (540 rev/min) 2199 rev/min;
ratio at rotation speed: 4.071;
direction of rotation clockwise, viewed from tractor rear

1000 rev/min
dimensions 35 mm diameter (1.3/8" conforming ISO R 500), 21 splines;
distance behind rear axle 304 mm;
p.t.o. speed at rated engine speed (2500 rev/min) 1050 rev/min;
engine speed at standard p.t.o. speed (1000 rev/min) 2381 rev/min;
ratio at rotation speed: 2.381;
direction of rotation clockwise, viewed from tractor rear

p.t.o. proportional to ground speed:

for size of tyres: 16.9 R 30, radius index 695 mm;
travelling distance for one revolution of p.t.o. shaft 0.530 m with 540 p.t.o. and 0.310 m with 1000 p.t.o.;
No. of p.t.o. shaft revolution for one revolution of the rear wheels: 8.2 with 540 p.t.o. and 14.1 with 1000 p.t.o.;
direction of rotation clockwise, viewed from tractor rear

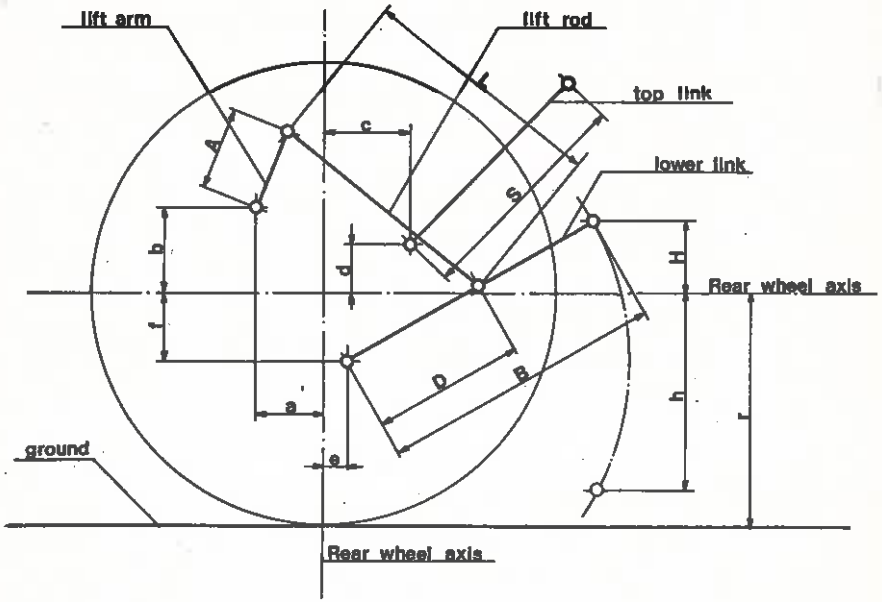
POWER LIFT

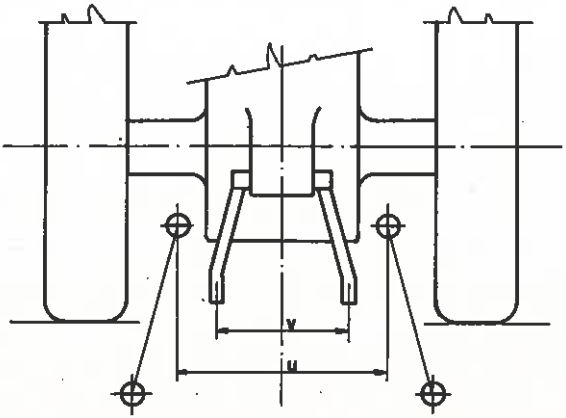
Own make;
hydraulic power lift in unit construction;
FIAT type A 31 gear pump with 32.8 l/min delivery;
driven by crankshaft with gear connection;
cartridge replaceable filter;
one single acting cylinder with bore 100 mm and stroke 128 mm;
over pressure (safety) valve setting 21.0 MPa;
hydraulic linkage lock for transport;
relief valve pressure setting 18.6 MPa;
3 double acting valves with oil tapping at rear of tractor available;
recommended oil change: 1600 hrs;
recommended filter change period: 400 hrs;

oil capacity (common at gear box and rear axles) 40.0 l;
maximum volume of oil available to external cylinder 23 l;
recommended oil: (see transmission oils)

THREE-POINT LINKAGE

Own make;
three-point linkage acc. to ISO 730/I, cat. 2;





Dimensions of rear implement linkage (projected lengths, in mm)
Underlined dimensions are valid for power lift test page 23

Rear tyres (size 16.9 R 30)	radius index	(r)	695
Front tyres (size 7.50-16)	radius index	(r')	375
Length of lift arms		(A)	255
Length of lower links		(B)	900
Distance of lift arm pivot point from rear wheel centre line	horizontally	(a)	10
	vertically	(b)	296
Horizontal distance between the 2 lower link points		(u)	450
Horizontal distance between the 2 lift arm end points		(v)	507
Length of upper link		(S)	648 to 910, 770
Distance of upper link pivot point from rear wheel centre line	horizontally	(c)	194
	vertically	(d)	197 or 247
Distance of lower link pivot point from rear wheel centre line	horizontally	(e)	71
	vertically	(f)	205
Distance of lower link pivot points to lift rod pivot points on lower links		(D)	428 or 504
Length of lift rods		(L)	466 to 603, 535

Heigth of lower link hitch points relative to rear axle centre line (situated 695 mm above ground) in mm

These data are valid for unloaded power lift

	Lift rod length L		
	466 mm	535 mm	603 mm
Lowest position (h)	67 mm	230 mm	396 mm
Highest position (H)	449 mm	295 mm	154 mm
Transport position (H')	449 mm	295 mm	154 mm

SWINGING DRAWBAR

Cat. A (in accordance with italian regulation);
height above ground (tyre size 16.9 R 30) 2 positions min 405 mm, max 515 mm;
distance of hitch point from rear wheel centre line: horizontally at rear 770 mm;
distance of hitch point from p.t.o. shaft end:

vertically, below	min 168 mm
	max 278 mm
horizontally, rear	540 rev/min p.t.o. 435 mm
	1000 rev/min p.t.o. 467 mm

lateral adjustement (centre of clevis: right of left hand): 252 mm
distance of pivot point from rear axle axis, horizontally at rear: 144 mm;
diameter drawbar pin hole: 29 mm

TRAILER HITCH

Cat. C (in accordance with italian regulation);
height above ground, 3 positions: 460 - 560 - 660 mm;
distance of hitch point from rear axle axis horizontally at rear: 576 mm;
distance of hitch point from p.t.o. shaft end:

vertically, below	220 - 120 - 20 mm
horizontally, rear	540 rev/min p.t.o. 240 mm
	1000 rev/min p.t.o. 272 mm

maximum vertical permissible load: 1470 daN;
diameter pin hole: 29 mm

HOLED DRAWBAR Non fitted

STEERING

Own make hydrostatic steering;
pump FIAT model C 25;
oil reservoir capacity 1.8 l;
hydrostatic steering DANFOSS model OSPC 100;
one double acting cylinder, bore 48 mm, stroke 215 mm;
working pressure 10.0 MPa;
acting directly on front axle;
filter oil: wire-mesh;
filter change period: 300 hrs;
recommended oil: OLIO FIAT TUTELA MULTI F;
oil change period: 800 hrs

BRAKES

Service brake: own make;
wet discs brake, 6 for wheel, 165 mm diameter;
pedal operated muscle power brake with mechanical transmission

acting on rear axle;
trailer braking take-off (hydraulic brake): optionally, in conformity with the french national regulation

Parking brake: with indipendent mechanic system;
hand operated muscle power with mechanical transmission;
acting discs brake in gear box on secondary shaft;
lever with ratchet operated

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

STEERING WHEELS

Two diagonal pneumatics at front 7.50-16, 6 ply;
max permissible load on each tyre 730 daN at 280 kPa;
track width 1420 mm, adjustable by telescopic axles in steps of 100 mm to 1920 mm;
rims 5.50 F - 16"

DRIVING WHEELS

Two radial pneumatics at rear 16.9 R 30, 6 ply;
max permissible load on each tyre 1675 daN at 130 kPa;
track width 1430 mm, adjustable by turning rims and lugs in steps of 100 mm to 1930 mm;
rims W 13 - 30"

WHEELBASE 2180 mm

PROTECTIVE STRUCTURE

FIAT TS 24 frame at 4 steel bars with canopy;
approval O.E.C.D. n° CSD 0746/61 (for model 60-66/20) and O.E.C.D. n° CSD 0746/62 (for model 60-66/12);
fitted tractor with 4x2 M16 tie rods at rear axle;
drive footplate 775 mm above ground

DRIVER'S SEAT

GRAMMER model DS44/2H;
upholstered seat with back rest;
adjustable suspension with shock absorber;
height of loaded (55 kg) seat in rear position 405 mm above footplate;
longitudinal adjustement 150 mm

NUMBER OF GREASE POINTS 9

DIMENSIONS (with tyres: at front 7.50-16, at rear 16.9 R 30)

Total lenght:	3570 mm	without ballast
	3930 mm	with ballast
total max width:	2350 mm	with and without ballast
total height:	2450 mm	to canopy top
	2380 mm	to top of exhaust mouth
ground clearance:	380 mm	below trailer hitch in lowest position

LIGHTING: angle of light in accordance with italian regulation

	Height above ground of centre with tyres 16.9 R 30 mm	Size mm	Distance from outside edge of tractor to center at 1530 mm track width mm
Head lights	1080	120 x 180	800
Side lights	1510	60 x 75	240
Rear lights	1510	60 x 120	285
Reflectors	1270	55 x 90	180

AVAILABLE TYRES

Tyre size	
at front	at rear
6.00 - 16, 8 ply	14.9 R 28, 6 ply 14.9 R 30, 6 ply 16.9 R 28, 6 ply 12.4 R 36, 6 ply

TEST CONDITIONS

Track of wheels — at front 1420 mm; at rear 1530 mm

Tractor mass — as used for drawbar performance test

Without ballast:	without driver	with driver
front	770 kg	790 kg
rear	1605 kg	1660 kg
total	2375 kg	2450 kg

Front ballast: 10 weights of 33 kg each + support, total 410 kg

Rear ballast: 3 weights (50 kg each) per wheel, total 300 kg

With ballast:		
front	1270 kg	1290 kg
rear	1815 kg	1870 kg
total	3085 kg	3160 kg

Fuel and lubricants used in tests

Fuel: agricultural Diesel oil (in accordance with italian standard
density at 15°C: 0,840 g/cm^3

Engine oil: FIAT AMBRA SUPER SAE 15 W/40

Gear box, rear axle, rear final drive, steering and power lift: OLIOFIAT TUTELA MULTI F SAE 20 W/30

Grease: FIAT TUTELA G9

COMPULSORY TESTS

(1) **MAIN POWER TAKE-OFF PERFORMANCE** (540 rev/min)

Date of tests: 8th June 1983
Location of tests: Istituto di Meccanica agraria – Università di Bologna (IMAUBo) – Cadriano
Type of dynamometer: SCHENCK hydraulic dynamometer U-40

Power	Speed		Fuel consumption			Specific energy
	engine	p.t.o.	hourly		specific	
kW	rev/min	rev/min	l/h	kg/h	g/kWh	kWh/l
Maximum power						
At 2-hours test						
40.9	2500	614	12.55	10.54	258	3.26
At standard p.t.o. speed						
38.3	2203	541	11.14	9.36	245	3.43
At rated engine speed						
40.9	2500	614	12.55	10.54	258	3.26
Part loads, the governor hand lever in the position corresponding to the maximum power at full load (curve A)						
(i) 85% of the torque at maximum power at 2-hours test						
37.0	2659	653	11.86	9.96	269	3.12
(ii) unloaded						
—	2769	680	4.00	3.36	—	—
(iii) 50% of the load defined in (i)						
19.0	2727	670	7.50	6.30	332	2.53
(iv) maximum power						
40.9	2500	614	12.55	10.54	258	3.26
(v) 25% of the load defined in (i)						
9.5	2748	675	5.42	4.56	480	1.75
(vi) 75% of the load defined in (i)						
28.0	2687	660	9.50	7.98	285	2.95

Power	Speed		Fuel consumption			Specific energy
			hourly		specific	
kW	engine rev/min	p.t.o. rev/min	l/h	kg/h	g/kWh	kWh/l
Part loads, the governor hand lever in the position corresponding to the standard p.t.o. speed at full load (curve B)						
(i) 85% of the torque at maximum power at standard p.t.o. speed						
35.8	2349	577	10.43	8.76	245	3.43
(ii) unloaded						
—	2516	618	3.14	2.64	—	—
(iii) 50% of the load defined in (i)						
18.2	2451	602	6.64	5.58	307	2.74
(iv) maximum power						
38.5	2199	540	11.14	9.36	242	3.47
(v) 25% of the load defined in (i)						
9.2	2488	611	4.64	3.90	424	2.81
(iv) 75% of the load defined in (i)						
26.7	2394	588	8.43	7.08	265	3.17

Standard specific fuel consumption (g/kWh): 269 - 332 - 245 - 307

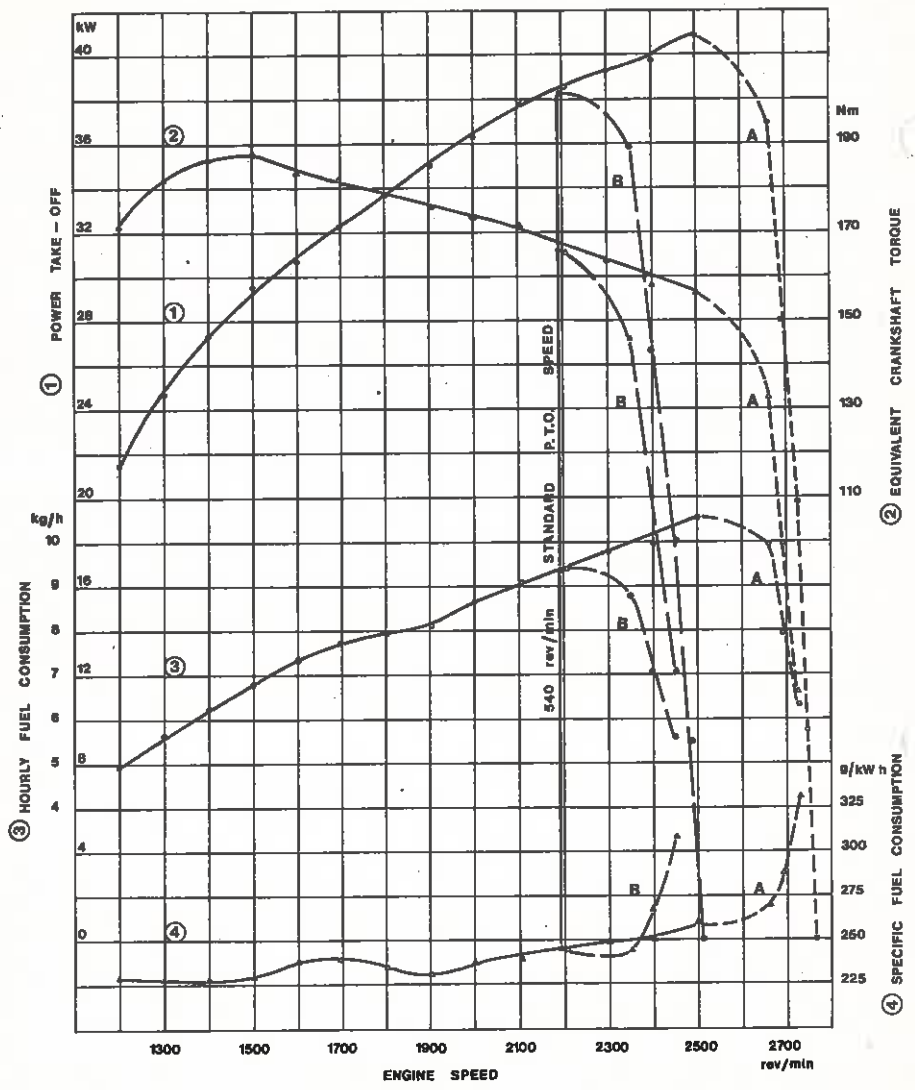
› load maximum engine speed: 2769 rev/min
Equivalent crankshaft torque ad maximum power (2 hours): 156 Nm
Maximum equivalent crankshaft torque: 188 Nm at 1500 rev/min of the engine

Mean atmospheric conditions:	temperature	19 °C
	pressure	1027 mbar
	relative humidity	45 %
Maximum temperatures:	coolant	81 °C
	engine oil	108 °C
	fuel	20 °C
	engine air intake	22 °C

POWER TAKE-OFF TEST

Date and location of test: 8 th June 1983
Istituto di Meccanica agraria - Università di Bologna (IMAUBo) - Cadriano

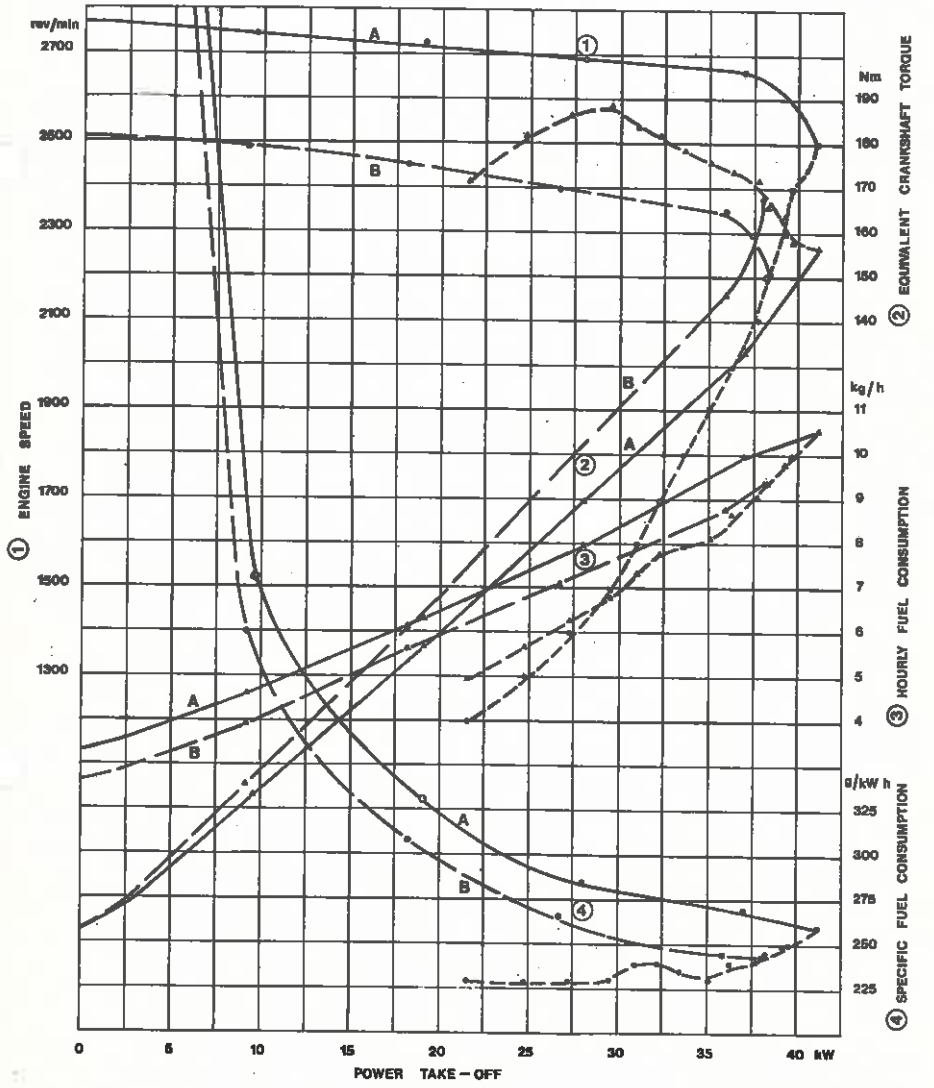
Motor: FIAT 8035.05



POWER TAKE-OFF TEST

Date and location of test: 8th June 1983
Istituto di Meccanica agraria - Università di Bologna (IMAUBo) - Cadriano

Motor: FIAT 8035.05



(2) **DRAWBAR PERFORMANCE**

Date of tests: 18th till 28th July 1983
Type of track: concrete

Gear no.and group	Driving speed	Power	Drawbar pull	Engine speed	Slip of wheels
	km/h	kW	daN	rev/min	%
(i) MAXIMUM POWER (unballasted) - Height of drawbar above ground 470 mm					
3 SRM	1.34	5.8	1570	2760	15.1
1 L	1.67	7.3	1580	2750	14.8
4 SRM	2.13	9.3	1580	2750	14.7
2 L	2.57	11.4	1600	2750	15.0
3 L	3.16	14.0	1590	2750	14.7
1 M	3.87	17.3	1610	2730	15.1
4 L	4.94	21.7	1580	2700	14.6
2 M	5.86	26.0	1600	2680	14.9
3 M	6.87	30.3	1590	2560	14.8
1 H	8.82	34.3	1400	2510	10.5
4 M	11.69	35.1	1080	2500	6.6
2 H	14.37	34.7	870	2490	4.7
3 H	17.96	33.9	680	2500	3.1
(ii) MAXIMUM POWER (ballasted) - Height of drawbar above ground 470 mm					
1 SRL	0.30	1.5	1740	2770	14.8
2 SRL	0.47	2.3	1760	2770	15.4
3 SRL	0.57	2.8	1760	2770	15.1
1 SRM	0.72	3.6	1780	2760	14.7
4 SRL	0.91	4.5	1790	2760	15.0
2 SRM	1.09	5.5	1800	2760	15.2
3 SRM	1.34	6.6	1780	2750	14.6
1 L	1.67	8.3	1800	2750	15.2
4 SRM	2.12	10.6	1800	2740	14.7
2 L	2.56	12.9	1810	2740	15.0
3 L	3.12	15.7	1810	2730	15.1
1 M	3.85	19.3	1800	2710	14.8
4 L	4.92	24.6	1800	2690	14.7
2 M	5.74	29.0	1820	2620	14.8
3 M	6.96	33.1	1710	2490	11.2
1 H	9.03	34.6	1380	2500	8.0
4 M	11.84	35.2	1070	2510	5.8
2 H	14.50	34.6	860	2500	4.2
3 H	17.90	33.8	680	2490	3.0
(iii) FIVE-HOUR-TEST at 75% of pull at maximum power					
3 M	7.62	27.1	1280	2610	7.2
(iv) FIVE-HOUR-TEST at pull corresponding to 15% wheel slip in test (ii)					
2 M	6.26	32.5	1820	2500	--

Total oil consumption during ten hours duration of tests (iii) and (iv): 15 g/h

Tyre size front: 7.50-16 6 ply GOOD YEAR
rear: 16.9 R 30 6 ply GOOD YEAR
Tread bar height at the beginning of drawbar tests: 95% at front, 95% at rear of tractor

Drawbar fuel consump. g/kWh	Specific energy kWh/l	Temperatures Fuel °C	Coolant °C	Engine oil °C	Atmospheric conditions Tempe-rature °C	Relative humidity %	Pressure mbar
Tyre inflation pressure: 280 kPa at front; 100 kPa at rear							
—	—	24	78	89	27	58	1016
530	1.58	24	78	92	27	58	1016
480	1.75	24	80	92	27	58	1016
420	2.00	26	81	94	28	56	1016
382	2.20	26	81	96	28	56	1016
360	2.33	26	81	97	28	56	1016
345	2.43	26	82	98	28	54	1016
315	2.67	26	82	98	29	54	1016
300	2.80	27	82	99	29	54	1016
308	2.73	27	82	100	29	54	1016
300	2.80	27	82	100	29	54	1016
304	2.76	27	81	100	29	54	1016
305	2.75	27	82	98	29	54	1016
Tyre inflation pressure: 280 kPa at front; 130 kPa at rear							
—	—	20	78	91	26	60	1018
—	—	20	78	92	26	60	1018
—	—	20	80	92	26	60	1018
—	—	20	80	93	26	58	1018
—	—	20	80	93	26	58	1018
—	—	20	80	94	26	60	1018
—	—	22	80	94	26	58	1018
512	1.64	22	80	94	27	58	1018
477	1.76	22	80	95	27	58	1018
415	2.02	23	80	95	27	58	1018
372	2.25	23	81	96	27	56	1018
370	2.27	23	81	96	28	54	1018
352	2.39	23	82	98	28	54	1018
315	2.65	23	82	98	29	54	1018
305	2.75	24	82	99	29	54	1018
305	2.75	24	82	100	29	54	1018
300	2.80	24	82	100	29	54	1018
302	2.78	24	82	99	29	54	1018
308	2.73	24	80	99	29	54	1018
305	2.77	24	82	103	26	58	1024
—	—	25	82	105	26	56	1024

Test (iv) was carried out with additional ballast (+ 400 kg at rear); the figures not quoted are therefore irrelevant

(3) TURNING SPACE AND TURNING CIRCLE

Wheel equipment	front:	7.50-16, 6 ply
	rear:	16.9 R 30, 6 ply
Track of wheels	front:	1420 mm
	rear:	1530 mm

	With brakes		Without brakes	
	left-hand	right-hand	left-hand	right-hand
Radius of turning space, m	3.50	3.60	3.90	3.95
Radius of turning circle, m	3.35	3.40	3.65	3.70

(4) LOCATION OF CENTRE OF GRAVITY

Height above ground	860 mm
Distance forward from rear axle centre	703 mm
Distance from tractor's median plane to the right	9 mm

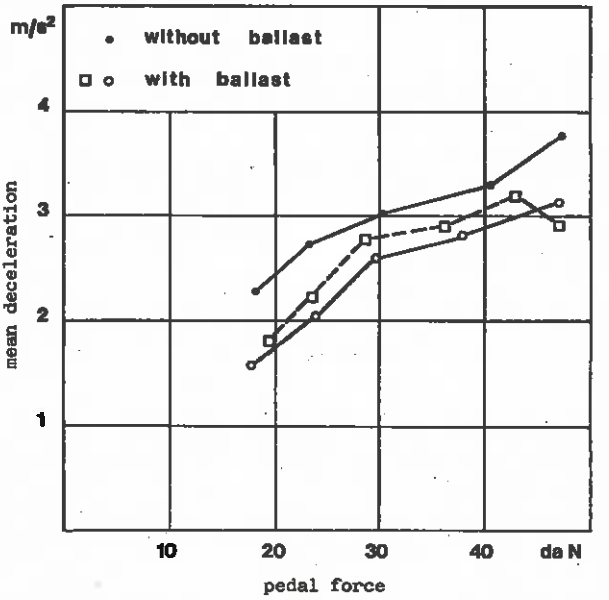
(5) BRAKING

Date of tests: 2nd September 1983

Tractor masses during tests with driver:	front kg	rear kg	total kg
without ballast	790	1660	2450
with ballast	1290	1870	3160

A) Service brake

Type-0-test (cold brakes) ———, Type-I-(fade)test — — —



Speed before application of brakes: without ballast 32.0 km/h
with ballast 31.9 km/h

The brakes were heated by towing of the tractor for 1 km

Maximum deviation of tractor from its original course: 0 m

Abnormal vibration: none

B) Parking brake

	Ballasted tractor on 18%-slope		Unballasted tractor on 12%-slope with trailer of 2500 kg	
	up	down	up	down
Braking device control force daN	17	18	19	20

(6) **MEASUREMENTS OF EXTERNAL NOISE LEVEL**

Date of test: 15th September 1983
Type of track: concrete
Type of sound level meter: BRÜEL AND KJAER model 2209

Results of test

Gear: 4 H
Travelling speed before acceleration: 22.8 km/h
Sound level: 84.5 dB(A)

(7) **NOISE MEASUREMENT AT THE DRIVER'S EAR**

Date of tests: 14th September 1983
Type of track: concrete
Type of sound level meter: BRÜEL AND KJAER model 2209
with FIAT safety frame type TS 24

Results of tests

Gear no. and range	Drawbar pull at wich the tractor develops the maximum sound level daN	Travelling speed nominal km/h	Travelling speed effective km/h	Sound level dB(A)
1 L	1520	1.79	1.75	94.5
2 L	1500	2.75	2.62	95.0
3 L	1500	3.37	3.52	96.0
1 M	1350	4.17	3.95	95.5
4 L	1550	5.36	4.65	97.5
2 M	1200	6.43	6.05	98.0
3 M	1500	7.87	5.75	98.0
3 M	light load	7.87	8.38	95.5
1 H	1250	9.82	9.05	97.0
4 M	950	12.52	11.80	97.5
2 H	750	15.13	14.45	98.0
3 H	600	18.53	18.10	98.0
4 H	350	29.48	29.00	97.0
4 H	light load	29.48	30.80	97.5

(8) POWER LIFT TEST AND HYDRAULIC POWER TEST

Date of tests: 4th July 1984

Power lift

	Height of lower hitch point above ground in down pos. mm	Vertical movement mm	Max. force exerted through full range daN	Corresp. pressure of hydraul. fluid MPa	Moment about rear axle daNm	Max. tilt angle of mast over range of lift degrees
At hitch points	465	525	2010	15.8	1952	--
On the frame	465	625	1490	15.8	2356	11°50'

Temperature of hydraulic fluid at start of test: 65°C

Lifting heights relative to horizontal lower links

mm	- 25	0	+ 100	+ 200	+ 300	+ 400	+ 500	+ 600	--	--

Lifting forces at hitch points

daN	2370	2310	2270	2210	2140	2040	2010	--	--	--

Lifting forces at test frame

daN	2130	2080	1970	1840	1790	1660	1570	1490	--	--

Hydraulic power test

Sustained pressure with relief valve open 17.5 MPa

Pump delivery rate at minimum pressure 33.0 l/min

Flow rate corresponding to a hydraulic pressure equivalent to 90 per cent of the actual relief valve pressure setting and corresponding hydraulic power:

Flow rate	31.2 l/min
Pressure	15.8 MPa
Power	8.2 kW

Flow rate and hydraulic pressure corresponding to maximum hydraulic power:

Flow rate	30.6 l/min
Pressure	17.2 MPa
Power	8.7 kW

Tapping point used for test: at rear of tractor

REMARKS AND REPAIR None

Bologna, July 1985

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