ISTITUTO SPERIMENTALE PER
LA MECCANIZZAZIONE AGRICOLA
SEZIONE DI TREVIGLIO



Test in accordance with the OECD Restricted Code for the official testing of agricultural tractors.

Agricultural Tractor

**GOLDONI**
**EURO 42 AW (4WD)**
**Articulated**

Type denomination
**ZB4**

OECD No. **1348/1**
Restricted Code



Agricultural Tractor

**JOHN DEERE**
**EURO 42 AW (4WD)**
**Articulated**

Type denomination
**FH0042**

OECD No. **1348/2**
Restricted Code



Submitted for test by: GOLDONI S.p.A
Via Canale, 3
Migliarina di Carpi (MO) ITALY

Date of OECD approval: 22.01.1992
Period of test: November 1991

ISMA - SOP Treviglio - Via Milano 43 - TREVIGLIO (BG) - ITALY

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The tractors GOLDONI EURO 42 AW and JOHN DEERE EURO 42 AW are technically identical in all main respects except colour and denominations

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*All stated dimensions and tests refer to tyre size 9.5R20 (8 ply) at front and 9.5R20 (8 ply) at rear, as well as to track widths 880 mm at front and 880 mm at rear.*

**- Tractor manufacturer**

. Name: GOLDONI S.p.A.;
. Address: Via Canale 3 - Migliarina di Carpi (MO) - ITALY;
- Location of tractor assembly: Migliarina di Carpi (MO) - ITALY;
- Submitted for test by: the manufacturer;
- Selected by: the manufacturer with the agreement of ISMA;
- Place of running in: Migliarina di Carpi (MO) - ITALY;
- Duration of running in: 50 hours.
- Location of test: I.S.M.A. - Via Milano 43 - Treviglio (BG) - ITALY

## 1 - SPECIFICATION OF TRACTOR

**TRACTOR**

- Make: GOLDONI respectively JOHN DEERE;
- Model: EURO 42 AW "4WD";
- Type denomination; ZB4 respectively FH0042
- Type: Wheeled tractor, unit construction, all wheels drive tractor;
- Number of driving wheels: four wheels drive, articulated frame steering;
- Serial number: 410388;
- First serial number: 410388.

ENGINE

- Make: LOMBARDINI;
- Model: LDW 1503 CHD;
- Type: water cooled 4-stroke diesel engine, indirect injection, naturally aspirated;
- Serial number: 3159077.

Cylinders

- Number/disposition: 3, vertical, in-line;
- Bore/stroke: 88 x 85 mm;
- Capacity: 1551 $cm^3$;
- Compression ratio: 22/1;
- Arrangement of valves: overhead;
- Cylinder liners: without liners.

Supercharging : none.

Fuel system

- Fuel feed system: AC corone fuel feed pump;
- Make, model and type of fuel filter: FIAMM 276.2175.046 filter replaceable paper cartridge;
- Capacity of fuel tank: 21 $dm^3$;
- Make, model and type of injection pump: LOMBARDINI 104.6590.249, immersed pump, one per cylinder, without serial number, in line injection pump;
  (Optionally: LOMBARDINI 104.6590.195, LOMBARDINI 104.6590.186/8).
- Manufacturer's production setting of injection pump:
  .flow rate: 34 +/-2 $mm^3$ /stroke at rated speed and full load corresponding 9.20 $dm^3$/h;
  .timing: 12 +/- 2° before TDC;
- Make, model and type of injectors: BOSCH DNO SD 293, multihole injecton nozzles;
- Injection pressure: 13 +/- 2 MPa.
  (Optionally: CONDIESEL LCC 670 250 5C).

Governor

- Make: LOMBARDINI;
- Model: 104.7362.234;
- Type: mechanical;
- Governor range of engine speed: from 800 to 3154 rev/min.;
- Rated engine speed: 3000 rev/min.

Air cleaner

- Main filter
  . make: VIRGIS;
  . model: 8" FC 08 - 12524 - 00;
  . type: dry paper element filter;
  . location: rear of engine ;
- Maintenance indicator: with the warning lamp on the dashboard.
  (Optionally: FBN FA 7.02055 oil bath air filter)

Lubrication system

- Type of feed pump: forced feed from gear pump;
- Total oil capacity including filter: 4.5 $dm^3$;
- Oil change period: 200 hrs;
- Type of filter: LOMBARDINI 2175.116 cartridge filter;
- Number: 1;
- Filter change period: 250 hrs;
- Oil specifications: see page 16.

Cooling system

- Type and detail: water cooling with impeller pump;
- Specification of fan: propeller fan driven by engine shaft;
- Number of fan blades: 8;
- Fan diameter: 340 mm;
- Type of temperature control: thermostat

Starting system

- Make: BOSCH;
- Model: JF (R) 12 V;
- Type: electromagnetic engagement;
- Starter motor power rating: 2.2 kW;
- Safety device: depressed pedal of clutch as safety device;
- Starting system for low temperatures: none.

Electrical equipment

- Voltage: 12 V;
- Generator:
.make: BOSCH;
.model: 55 A;
.type: alternator:
.power: 660 W;
- Battery: 1 lead acid;
.capacity: 90 Ah at 20 hours rating.

Exhaust system

- Make: LOMBARDINI;
- Model: 5460.291; (DGM pending)
- Type: at chamber reflection absorption;
- Location: on the left hand side of the engine, lateral discharged;
- Height of outlet above ground: 500 mm.

## TRANSMISSION

Clutch: utilized for travelling of tractor and PTO engaged

- Make: PITTERI e VIOLINI;
- Model: F 215;
- Type: single disk dry clutch;
- Number of plates: 1;
- Plates diameter: 215 mm;
- Control system: mechanical operated by pedal.

Gear box

- Make: GOLDONI;
- Model: 0025718;
- Type: mechanical speed change gear ;
- Arrangement: three speeds forward, with two ranges of speeds, and one reverse group;
- Number of speeds : 6 forward and 3 reverse;
- Available options: none

Rear axle and final drives

- Make: own make;
- Model: 0025719;
- Type: bevel gear differential and epicyclic final drive;

Differential lock

- Make: own make;
- Model: 0025720;
- Type: self disengaged;
- Control system: pedal operated with hydraulic transmission.

Front axle and final drives

- Make: own make;
- Model: 0025721;
- Type: bevel gear differential and epicyclic final drive,

Differential lock

- Make: own make;
- Model: 0025722;
- Type: self disengaged;
- Control system: pedal operated with hydraulic transmission

Transmission lubrication

- Front axle, final drives, gear box (in common).
. total capacity including filter: 13.5 $dm^3$;
. change period: 800 hrs;
. filter change period: clean only;
- Rear axle, final drives, power lift and hydraulic system (in common);
. total capacity: 8.5 $dm^3$;
. change period: 800 hrs;
. filter change period: clean only.
- Recommended oil: see page 16.

**Total ratios and speeds**

| Gear | Group | Number of engine revolutions for one revolution of the driving wheels | Nominal travelling speed at rated engine speed of 3000 rev/min (*) km/h |
|---|---|---|---|
| **FORWARD** | | | |
| 1 | S | 330.17 | 1.52 |
| 2 | S | 158.08 | 3.18 |
| 3 | S | 95.98 | 5.24 |
| 1 | F | 65.06 | 7.74 |
| 2 | F | 31.15 | 16.16 |
| 3 | F | 18.91 | 26.61 |
| **REVERSE** | | | |
| 1 | | 230.59 | 2.18 |
| 2 | | 110.41 | 4.56 |
| 3 | | 67.03 | 7.51 |

*(*) Calculated with a tyre dynamic radius index of 445 mm. (ISO 4251/1 -1984)- Number of rev. of front wheels for one rev. of rear wheels: 1.0.*

## POWER TAKE-OFF

Power take-off proportional to engine speed

- Type: not independent, at rear of tractor, in tractor's median plane, engaged or disengaged by hand lever at the left hand side of the seat.
  Driven by travel clutch; ISO Standard 500-1979.
- Number of shafts: 1;
- Method of changing power take-off shaft ends and speeds: none.

540 rev/min

- Dimension ISO Standard 500-1979 type 1 (35 mm - 6 splines);
- PTO speed at rated engine speed: 638 rev/min;
- Engine speed at standard power take-off speed: 2540 rev/min;
- Ratio of rotation speeds (engine speed/pto speed): 4.70;
- Power restriction and maximum torque: 36.70 kw, 57.0 daNm.

| | P.T.O | |
|---|---|---|
| - Height above ground | 485 | mm |
| - Distance from the median plane of the tractor | 0 | mm |
| - Distance behind rear axle or forward from frontaxle | 335 | mm |
| - Direction of rotation (viewed facing driving end) | clockwise | |

Power take-off proportional to ground speed

- location at rear of tractor, in tractor's median plane, engaged or disengaged by hand level at the left hand side of the seat.
- Number of shafts: 1;
- Travelling distance for one revolution of power take-off shaft: 176 mm;
- Number of power take-off shaft revolutions for one revolution of driving wheels: 15.13;
- Direction of rotation with forward gear engaged (viewed facing driving end): clockwise.

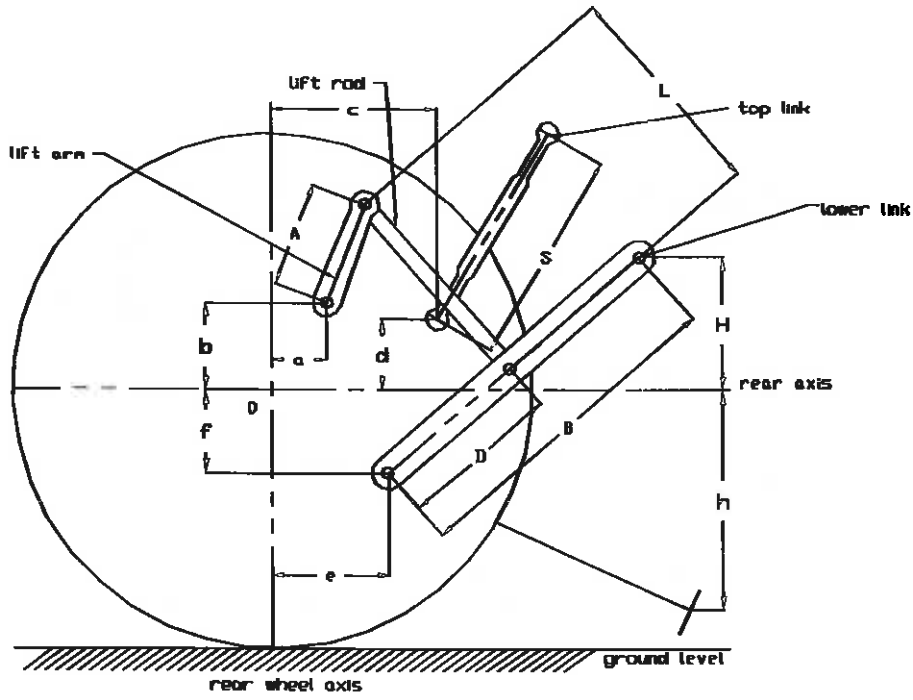
**POWER LIFT**

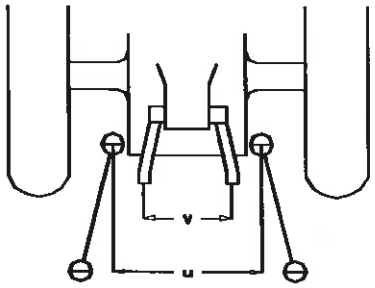
- Make: GOLDONI;
- Model: 0025710;
- Type: hydraulicl system;
- Type of hydraulic system: open centre system;
- Type and number of cylinders: 2 external single acting;
- Type of lock for transport: none
- Relief valve pressure setting: 14.0 +/- 0.5 MPa;
- Opening pressure of anti-shock valve: none;
- Lift pump type: hydraulic rotary pump, driven by engine shaft,
- pump make HYDROIRMA AP2/8.5D-218 (opt. BOSCH 0510425011);
- Trasmission between pump and engine: mechanical;
- Type and number of filters: one, metal filter;
- Change interval: clean only;
- Oil capacity: 8.5 $dm^3$;
- Site of oil reservoir: rear axle and final drive;
- Position, type and No. of additional oil plugs: 1 ways distributor at rear of tractor;
- Maximum volume of oil available to external cylinders: 4.0 $dm^3$;

- Recommended oil: see page 16.

Three-point linkage

- Category: 1 N in conformity with ISO 730/1 - 1977;
- Category adapter: none .


lift rod
c
L
top link
lift arm
lower link
A
S
H
b
a
d
rear axis
D
f
B
D
h
e
ground level
rear wheel axis


v
u

## POWER LIFT

Dimensions of linkage geometry (when connected to the standard frame)

| | Dimension or range (mm) | Settings used in test (mm) |
|---|---|---|
| Length of lift arms | (A) 231 | 231 |
| Length of lower links | (B) 543 | 543 |
| Distance of lift arm pivot point from rear wheel axis (behind) :horizontally | (a) 80 | 80 |
| :vertically | (b) 285 | 285 |
| Horizontal distance between the 2 lower link points | (u) 335 | 335 |
| Horizontal distance between the 2 lift arm end points | (v) 301 | 301 |
| Length of upper link | (S) from 400 to 540 | 520 |
| Distance of upper link pivot point from rear wheel axis :horizontally | (c) 230-236-224 | 224 |
| :vertically | (d) 232-197-267 | 267 |
| Distance of lower link pivot point from rear wheel axis :horizontally | (e) 197 | 197 |
| :vertically | (f) 109 | 109 |
| Distance of lower link pivot point to lift rod pivot points on lower links | (D) 310 | 310 |
| Length of lift rods | (L) 450 | 450 |
| Height of lower hitch points relative to the rear wheel axis | | |
| - in Low position | (h) 205 | 205 |
| - in High position | (H) 235 | 235 |
| - Height above ground of lower hitch points when locked in transport position (*) | | 680 |

(*) *Assuming the dynamic radius index = 445 mm (ISO 4251/1- 1984)*

**SWINGING DRAWBAR:** none.

**HOLED DRAWBAR:** none.

**TRAILER HITCH**

- Type: GOLDONI DGM-GA 628 cat. b
- Hole diameter: 28.5 mm;
- Height above ground: 320 min. 585 max. mm;
- Distance of hitch point from rear wheel axis, horizontally: 418 mm;
- Distance of hitch point from power take-off shaft end;
  .vertically : 165 mm below, 239 mm above;
  .horizontally : 46 mm;
- Maximum vertical permissible load: 4.9 kN.

**STEERING**

- Specification: mechanical with hydraulic servosteering type, working on centre pivot of the tractor by means of: steering wheels worm gear box, connecting rod and hydraulic cylinder;
- Make: DANFOSS;
- Model: 0025723;
- Type: hydrostatic OSPC 80 LS with valve OLSA 40;
- Working pressure: 9 MPa;
- Oil capacity: 8.5 $dm^3$;
- Oil change period: 800 hrs;
- Filter change period: clean only;
- Recommended oil: see page 16.

**BRAKES**

Service brake

- Make: GOLDONI;
- Model: 0024963 (right brake), 0024964 (left brake);
- Type: drum brake dia = 270 mm lining material;
- Method of operation: hydraulically actuated with one pedal;
- Trailer braking take-off: none.

Parking brake

- Type: fully independent of service brake, ;
- Method of operation: mechanical by hand lever.

Steering brake : none.

**STEERING WHEELS**:none. (articulated)

**DRIVING WHEELS**

- Number: four;
- Location: two at front and two at rear, permanent engaged
- Track width: 880 min.1150 max., mm;
- Adjustment: changin the position of the rims with respect to the disc.

**WHEELBASE**: 1215 mm.

**PROTECTIVE STRUCTURE**

Specifications

- OECD approval number: (pending)
- date of approval:
- location and country of test of protective structure: IMA Bologna ITALY
- the reference mass and wheelbase used for calculating impact energies and crushing forces were: kg mm;
- Make: GOLDONI;
- Model: K 09;
- Type: roll-bar;
- Manufacturer's name: GOLDONI;
  . address: Via Canale 3 MIGLIARINA di CARPI (MO) - ITALY;
- Protective device: roll-bar tiltable.

**DRIVER'S SEAT**

- Make: GOLDONI
- Model: EURO 0025711 (opt. Y 01 0023270 EEC om. e2 034);
- Type: upholstered seat with back rest;
- Type of suspension: adjustable spring;
- Type of damping: shock absorber;
- Range of adjustment, longitudinal 76 mm, vertical 76 mm.

**PASSENGER'S SEAT**: none

## LIGHTING

Lighting system in accordance with E.E.C. 78/933

| | Height above ground of centre with tyre (*) (mm) | Size (mm) | Distance from out side edge of tractor to centre at 880 mm trak width mm |
|---|---|---|---|
| Headligths | 816 | 168*120 | 145 |
| Front park. lights | 747 | 84*84 | 341 |
| Front finger post | 782 | 84*84 | 341 |
| Rear park. lights | 889 | 168*61 | 326 |
| Rear finger post | 889 | 168*61 | 408 |
| Stop | 889 | 168*61 | 326 |
| Reflectors | 823 | 90*83 | 360 |

(*) *Tyre size: 9.5R20 front - 9.5R20 rear.*

## TEST CONDITIONS

Overall dimensions with tyres 9.5R20 front and 9.5R20 rear

| | Length (mm) | Width (mm) min | Width (mm) max | Height (mm) at top of protec. struc. |
|---|---|---|---|---|
| Without ballast | 2924 | 1110 | 1395 | 2134 |
| With ballast | 2924 | 1110 | 1395 | 2134 |

- Ground clearance (unballasted tractor): 325 mm;
- Clearance-limiting part: front axle.

**Tractor mass** (with tanks full, with roll-bar, water in tyres none)

| | Units | Front | Rear | Total |
|---|---|---|---|---|
| Without driver | | | | |
| Without ballast | kg | 750 | 480 | 1230 |
| With ballast | kg | 800 | 530 | 1330 |
| With driver | | | | |
| Without ballast | kg | 765 | 540 | 1305 |
| With ballast | kg | 815 | 590 | 1405 |

**Ballast**

| | no. of weights | total weight (kg) | water (kg) |
|---|---|---|---|
| front | 1 + 1 | 50 | - |
| rear | 1 + 1 | 50 | - |
| additional | - | - | - |

**Tyres and track width specifications**

| - Tyres | | front | rear |
|---|---|---|---|
| . dimensions | | 9.5R20 | 9.5R20 |
| . ply rating | | 8 | 8 |
| . type | | radial | radial |
| . maximum load (tyre manufacturer's) | daN | 956 | 956 |
| . maximum load (tractor manufact.) | daN | 1177 | 1177 |
| . inflation pressure (tyre manufact.) | kPa | 280 | 280 |
| . dynamic radius index | mm | 445 | 445 |
| - Chosen track width | mm | 880 | 880 |
| - Tyres on request | | 7.50R18 | 7.50R18 |
| | | 11.50/80-15.3 | 11.50/80-15.3 |
| | | 7.50R20 | 7.50R20 |
| | | 260.80R20 | 260.80R20 |
| | | 250.80'R18 | 250.80R18 |
| | | 9.00R16XS | 9.00R16XS |

**Oils, lubrication and fuel - Capacity and change interval**

| | capacity $dm^3$ | oil change h | filter change h |
|---|---|---|---|
| Engine | 5.2 | 250 | 250 |
| Gear box | 13.5 | 800 | clean only |
| Front axle | " | " | " |
| Final drives (front) | " | " | " |
| Rear axle and final drives | 8.5 | 800 | clean only |
| Hydraulic system | " | " | " |
| Other (steering, etc.) | " | " | " |

Fuel and lubricants reccomended and used in tests all in accordance with API and DIN NORM.

Fuel
- Type: AGIP DIESEL, DIN 51601
  (in accordance with the national standard)
- Specific gravity at 15 C: 0.835 g/cm.

Engine oil
- Type: AGIP DIESEL SIGMA SAE 30 W / 40;
- Viscosity: 12.50 cSt;
- Classification: API SE-CD.

| Transmission oil | front axle and final drive and gear box | rear axle, final drive |
|---|---|---|
| -Type | AGIP ROTRA MP 80 W/90 | AGIP OSO 68 |
| -Viscosity | 15.0 cSt | 8.6 cSt |
| -Viscosity index | 105 | 105 |
| -Classification | API GL5 | DIN 51524 |

Hydraulic fluid
- Type: AGIP OSO 68;
- Viscosity: 8.6 cSt;
- Classification: DIN 51524 .

Steering oil
- Type: AGIP OSO 68;
- Viscosity: 8.6 cSt;
- Classification: DIN 515224 .

Grease
- Type: ESSO GP GREASE;
- Number of lubrication points: 8.

## II - TEST RESULTS

COMPULSORY TESTS RESULTS

(1) **MAIN POWER TAKE-OFF PERFORMANCE**

- Date and location of test: 20.11.1991 - I.S.M.A - TREVIGLIO (BG) ITALY
- Type of dynamometer: ZÖELLNER 350 AC

| 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 - 2 HOUR TEST** | | | | | | |
| 24.1 | 3000 | 638 | 9.20 | 7.68 | 319 | 2.62 |
| **POWER AT RATED ENGINE SPEED** | | | | | | |
| 24.1 | 3000 | 638 | 9.20 | 7.68 | 319 | 2.62 |
| **STANDARD POWER TAKE-OFF SPEED ( 540 +/- 10 rev/min)** | | | | | | |
| 21.8 | 2536 | 540 | 7.99 | 6.67 | 306 | 2.73 |
| **PART LOADS** | | | | | | |
| i) The torque corresponding to maximum power at rated engine speed | | | | | | |
| 24.1 | 3000 | 638 | 9.20 | 7.68 | 319 | 2.62 |
| ii) 85% of torque obtained in i) | | | | | | |
| 20.9 | 3068 | 653 | 7.48 | 6.25 | 299 | 2.80 |
| iii) 75% of torque defined in ii) | | | | | | |
| 15.8 | 3097 | 659 | 6.18 | 5.16 | 326 | 2.56 |
| iv) 50% of torque defined in ii) | | | | | | |
| 10.6 | 3124 | 665 | 5.03 | 4.20 | 395 | 2.11 |
| v) 25% of torque defined in ii) | | | | | | |
| 5.3 | 3138 | 668 | 3.64 | 3.04 | 572 | 1.46 |
| vi) unloaded | | | | | | |
| 0 | 3154 | 671 | 2.72 | 2.27 | - | - |

**PART LOADS AT STANDARD POWER TAKE-OFF SPEED (540 rev/min)**

| Power | Speed | | Fuel consumption | | | |
|---|---|---|---|---|---|---|
| | 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 | | | | | | |
| 21.8 | 2536 | 540 | 7.99 | 6.67 | 306 | 2.73 |
| ii) 85% of torque obtained at maximum power | | | | | | |
| 18.9 | 2587 | 550 | 6.20 | 5.18 | 274 | 3.04 |
| iii) 75% of torque defined in ii) | | | | | | |
| 14.4 | 2640 | 562 | 4.97 | 4.15 | 288 | 2.90 |
| iv) 50% of torque defined in ii) | | | | | | |
| 9.8 | 2679 | 570 | 4.04 | 3.37 | 345 | 2.42 |
| v) 25% of torque defined in ii) | | | | | | |
| 4.9 | 2701 | 575 | 3.05 | 2.55 | 520 | 1.60 |
| iv) unloaded | | | | | | |
| 0 | 2713 | 577 | 2.19 | 1.83 | - | - |

**STANDARD SPECIFIC FUEL CONSUMPTION:** 299/395/274/345 g/kWh

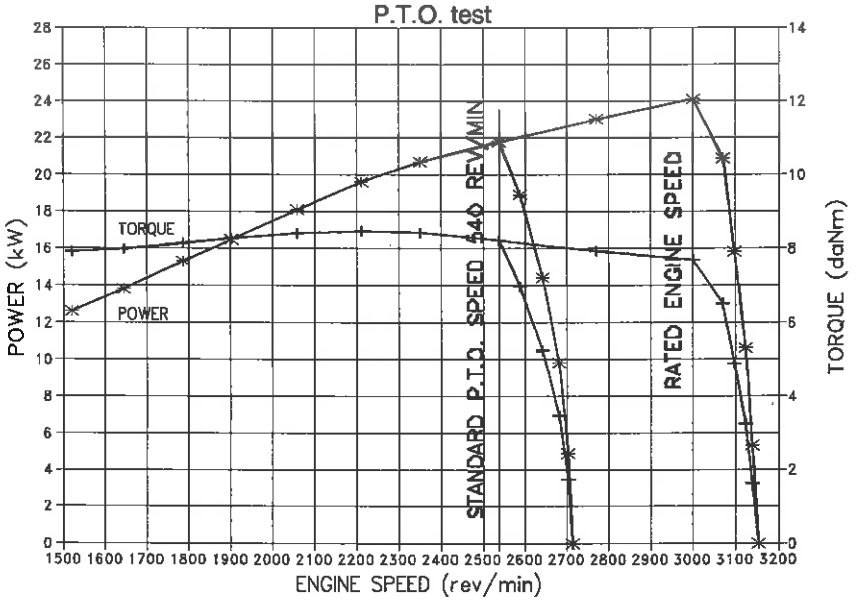
- No load maximum engine speed: 3154 rev/min
- Torque (1) at maximum power at rated engine speed: 7.67 daNm
- Maximum torque (1) (engine speed: 2211 rev/min) 8.47 daNm

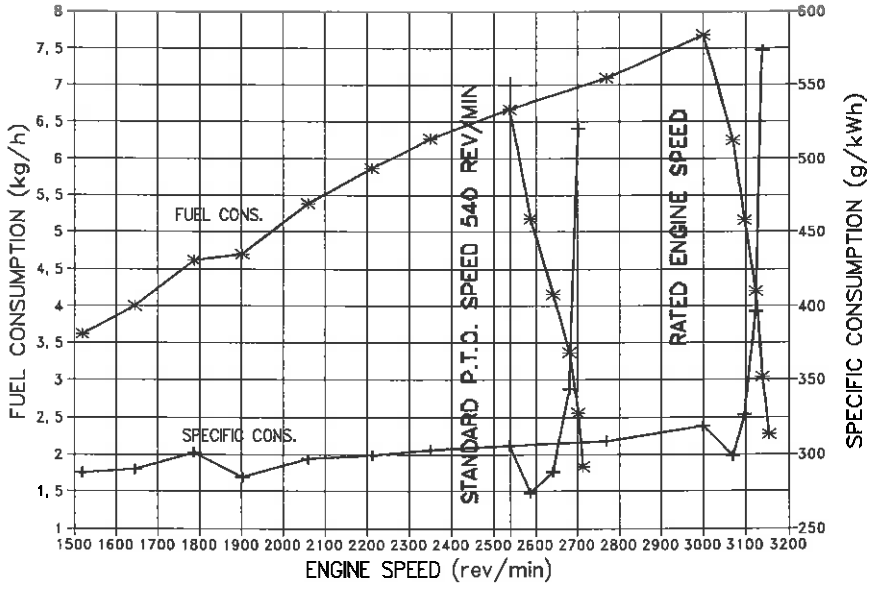
- Mean atmospheric conditions:
  - Temperature ..... 20 °C
  - Pressure ..... 99.0 kPa
  - Relat. humidity ..... 73 %

- Maximum temperatures:
  - Coolant ..... -- °C
  - Engine oil ..... 125 °C
  - Fuel ..... 36 °C
  - Engine air intake ..... 22 °C

(1) *The torque is the equivalent crankshaft torque.*

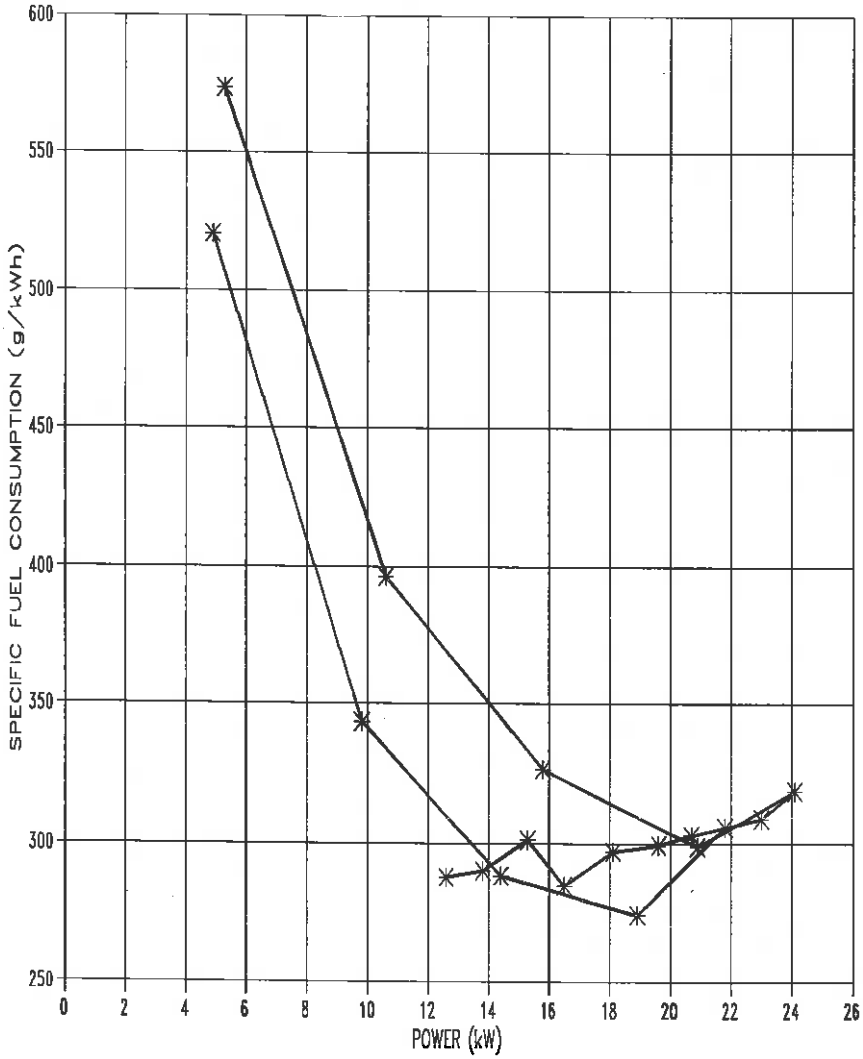
GOLDONI EURO 42 AW (4WD) Articulated



GOLDONI EURO 42 AW (4WD) Articulated

P.T.O. test



## 2) POWER LIFT AND HYDRAULIC POWER TEST

- Date and location of tests: 25.11.91 - ISMA Treviglio (BG)

### 2.1 POWER LIFT

| | | at hitch point | on the frame |
|---|---|---|---|
| Height of lower hitch point above ground in down position | mm | 240 | 240 |
| vertical movement | mm | 440 | 416 |
| Maximum corrected force exerted through full range | daN | 1021 | 982 |
| Corresponding pressure of hydraulic fluid | MPa | 14.5 | 14.5 |
| Moment about rear axle | daNm | 756 | 1326 |
| Maximum tilt angle of mast over range of lift | degrees | -- | - 2 |

| Lifting heights relative to the horizontal lower links | | | | | | | |
|---|---|---|---|---|---|---|---|
| mm | -96 | 0 | 100 | 200 | 300 | 320 | 344 |
| Lifting forces at hitch points | | | | | | | |
| daN | 1480 | 1319 | 1218 | 1139 | 1074 | -- | 1021 |
| Lifting forces at test frame | | | | | | | |
| daN | 1514 | 1343 | 1198 | 1072 | 1031 | 982 | -- |

### 2.2) HYDRAULIC POWER TEST

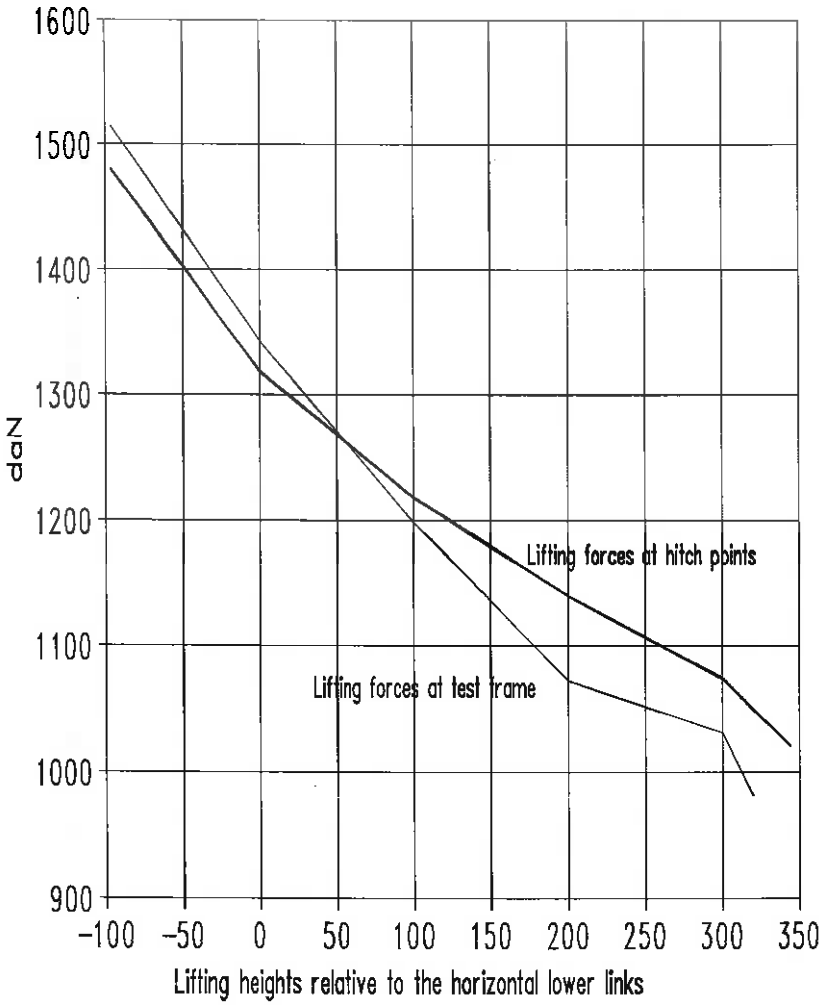
Sustained pressure with relief valve open: 14.5 MPa;
Pump delivery rate at minimum pressure: 17.1 l/min;

| Hydraulic power | flow rate kW | l/min | pressure MPa | oil temp. °C |
|---|---|---|---|---|
| At 90% of the actual relief valve setting ..... | 2.08 | 9.6 | 13.0 | 63 |
| Maximum ..... | 2.71 | 13.0 | 12.5 | 62 |

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

## GOLDONI EURO 42 AW (4WD) ARTICULATED

### PERFORMANCE OF POWER LIFT



## 3) DRAWBAR PERFORMANCE

- Date of test: 26.11.1991
- Type of track: concrete
- Type and size of tyres front: 9.5R20 - 8 ply; rear : 9.5R20 - 8 ply

Height of drawbar above ground: 450 mm
Tyre inflation pressure: unballasted .front: 280 kPa .rear: 280 kPa

| Gear | Power | Draw. pull | Speed | Eng. speed | Slip of wheel | Specific ener. cons. | | Temperatures fuel | col. | eng. | Atm. temp. | hum. | cond. press. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | daN | km/h | rev/min | % | kWh/l | g/kWh | °C | °C | °C | °C | % | kPa |

3.1) MAXIMUM POWER IN TESTED GEARS (unballasted tractor)

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1S | 3.86 | 1031 | 1.35 | 3133 | 15 | 0.962 | 868 | 36 | --- | 112 | 17 | 77 | 99.3 |
| 2S | 7.25 | 929 | 2.81 | 3120 | 15 | 1.367 | 611 | 36 | --- | 112 | 17 | 77 | 99.3 |
| 3S | 10.93 | 857 | 4.59 | 3099 | 15 | 1.772 | 471 | 37 | --- | 114 | 18 | 78 | 99.3 |
| 1F | 16.94 | 912 | 6.69 | 3057 | 15 | 2.193 | 381 | 37 | --- | 115 | 17 | 78 | 99.3 |
| 2F | 18.66 | 423 | 15.90 | 3003 | 1 | 2.037 | 410 | 36 | --- | 116 | 17 | 77 | 99.3 |

## 4) TRANSMISSION AND FUEL CONSUMPTION CHARACTERISTICS

| Gear | Power | Draw. pull | Speed | Eng. speed | Slip of wheel | Specific ener. cons. | | Temperatures fuel | col. | eng. | Atm. temp. | hum. | cond. press. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | daN | km/h | rev/min | % | kWh/l | g/kWh | °C | °C | °C | °C | % | kPa |

4.1) Selected gear at maximum power

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2F | 18.66 | 423 | 15.90 | 3003 | 1 | 2.037 | 410 | 36 | --- | 116 | 17 | 77 | 99.3 |

4.1.1) 75% of pull at maximum power at rated speed

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2F | 14.21 | 314 | 16.31 | 3079 | 1 | 2.046 | 408 | 35 | --- | 110 | 17 | 77 | 99.4 |

4.1.2) 50% of pull at maximum power at rated speed

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2F | 9.48 | 208 | 16.42 | 3101 | 1 | 1.567 | 533 | 34 | --- | 107 | 16 | 78 | 99.4 |

4.1.3) next higher gear giving the same pull as in 4.1.1 reduction engine speed

IMPOSSIBLE TEST

4.1.4) next higher gear giving the same pull as in 4.1.2 reduction engine speed

IMPOSSIBLE TEST

| Gear | Power | Draw. pull | Speed | Eng. speed | Slip of wheel | Specific ener. cons. | | Temperatures fuel | col. eng. | | Atm. temp. | hum. | cond. press. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | daN | km/h | rev/min | % | kWh/l | g/kWh | °C | °C | °C | °C | % | kPa |

4.2) Selected gear nearest to 7.5 km

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1F | 16.94 | 912 | 6.69 | 3057 | 15 | 2.193 | 381 | 37 | --- | 115 | 17 | 78 | 99.3 |

4.2.1) 75% of pull at maximum power at rated speed

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1F | 14.44 | 682 | 7.63 | 3084 | 3 | 2.153 | 388 | 34 | --- | 108 | 16 | 77 | 99.4 |

4.2.2) 50% of pull at maximum power at rated speed

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1F | 9.95 | 457 | 7.84 | 3106 | 1 | 1.713 | 487 | 35 | --- | 108 | 15 | 77 | 99.4 |

4.2.3) next higher gear giving the same pull as in 4.2.1 reduction engine speed

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2F | 13.15 | 611 | 7.75 | 1505 | 1 | 2.440 | 342 | 36 | --- | 107 | 15 | 76 | 99.4 |

4.2.4) next higher gear giving the same pull as in 4.2.2 reduction engine speed

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2F | 9.17 | 421 | 7.85 | 1523 | 1 | 1.823 | 458 | 36 | --- | 104 | 15 | 77 | 99.3 |

REPAIRS AND REMARKS: none.

REPAIRS AND REMARKS: none.

TEST CARRIED OUT BY
(P.a. Giovanni LAMORATTA)

THE DIRECTOR OF TESTING STATION
(Prof. Giuseppe COLZANI)

HEAD OF ISMA - ROMA
(Ing. Giovanni SANTORO)

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