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CODE 2
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NEBRASKA TRACTOR TEST LABORATORY
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# REPORT ON TEST IN ACCORDANCE WITH OECD STANDARD CODE 2 FOR THE OFFICIAL TESTING OF AGRICULTURAL TRACTORS



**John Deere 8230T Power Shift**
**Rubber Tracklaying Tractor**

| | |
|---|---|
| MANUFACTURED BY: | John Deere Tractor Works<br>3500 East Donald Street<br>Waterloo, IA 50704-0270 |
| NEBRASKA TEST NO. | 1886 |
| TEST DATES: | June – October, 2006 |

This test report provides the results of the tests conducted in accordance with the OECD Standard Test Code for the Official Testing of Agricultural Tractor Performance - C(87)53 Final, Code 2.

**This report has been approved by the OECD Coordinating Centre in Paris on 14 May 2007 for the John Deere 8230T Power Shift, Rubber Tracklaying tractor with OECD Number 2/2 369.**

No reproduction of this report or any part of it can be made without prior approval by the Nebraska Tractor Test Laboratory, Lincoln, Nebraska USA.

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Date: DEC 0 6 2007

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| | | | |
|---|---|---|---|
| C[1] | | - Tractors manufacturer's name and address: | John Deere Tractor Works<br>3500 East Donald St.<br>P.O. Box 270<br>Waterloo, IA 50704-0270 |
| D[1] | | - Location of tractor assembly: | Same |
| D | | - Submitted for test by: | The Manufacturer |
| C | | - Selected for test by: | The Manufacturer in agreement with the Nebraska Tractor Test Laboratory |
| D | | - Place of running-in: | John Deere Product Engineering Center, Waterloo, Iowa |
| D | | - Duration of running-in (hours): | 84 hours |
| C | | - Location of test: | Nebraska Tractor Test Laboratory, Lincoln, Nebraska U.S.A. |
| | **1.** | **SPECIFICATIONS OF TRACTOR** | |
| | **1.1** | **Identification** | |
| C | 1.1.1 | - Make of tractor (*): | John Deere |
| C | | - Model (trade name): | 8230T |
| C | | - Type:<br>• *2 WD or 4 WD; rubber or steel tracks (if applicable); articulated 4 WD or articulated 4WD with twin (dual) wheels (if applicable)* | Rubber tracks |
| | | (*) *Possibly different from tractor manufacturer's name* | |
| | 1.1.2 | Numbers | |
| D | | - 1st Serial No. or prototype: | CONFIDENTIAL |
| C | | - Serial No.: | *RW8230T901181* |
| | 1.1.3 | Other specifications (if applicable) | |
| D | | - Model(s) for other countries: | N/A |
| C | | - Transmission type or gears x ranges: | 30K Power Shift Transmission (PST) |
| C | | - Speed version:<br>• *30, 40, or 50 km/h* | 30 km/h |
| D | | - Manufacturer identification or Technical type number: | N/A |

1. The information opposite each item shall be validated by the Testing Station. An item marked "C" indicates to the test report user that the information declared by the manufacturer has been checked; an item marked "D" that the manufacturer's declaration has been endorsed. For example, the make of the supercharging device is declared by the manufacturer and checked "C" as consistent with the tractor by the testing station, while the pressure of the supercharging device is simply declared "D" by the manufacturer. Testing station's markings show compliance with article 8 of Appendix 3 to the Decision.

| | | | |
|---|---|---|---|
| | **1.2** | Engine | |
| C | | - Make / Model / Type: | John Deere / 6090HRW02 / Diesel; 4-stroke; turbocharged, direct injection, air to air intercooled |
| C | | - Serial No.: | *RG6090L005563* |
| | 1.2.1 | Cylinders | |
| C | | - Number / disposition: | 6 / inline, vertical |
| D | | - Bore / Stroke (mm / mm): | 118.4 x 136 |
| D | | - Capacity ($cm^3$): | 8984 |
| D | | - Compression ratio: | 16.3 : 1 |
| D | | - Arrangement of valves: | Overhead; 4 valves per cylinder |
| D | | - Cylinder liners (wet or dry): | Wet; replaceable |
| | 1.2.2 | Supercharging | |
| C | | - Make / Model / Type: | Borg Warner / RE529978 / Variable Geometry exhaust gas driven |
| D | | - Pressure (MPa): | 0.170 |
| | 1.2.3 | Fuel System | |
| C | | - Fuel feed system: | Electric Transfer Pump |
| | | - Make / Model / Type of fuel filter(s) | |
| C | | . Primary: | Racor / RE520906 / 10 micron multilayer water separating |
| C | | . Secondary: | Racor / RE523236 / 2 micron multilayer water separating |
| D | | - Capacity of fuel tank ($dm^3$): | 492.1 |
| C | | - Make / Model / Type of injection pump: | Denso / RE519597 / HPCR; electronic |
| C | | - Serial No.: | NA |
| | | - Manufacturer's production setting of injection pump | |
| C | | . Flow rate (rated engine speed and full load) ($dm^3/h$): | 42.7 +/- 1.7 |
| D | | . Timing: | Variable |
| D | | - Make / Model / Type of injectors: | Denso / RE529151 / HPCR Injection |
| D | | - Injection pressure (MPa): | 125 |
| C | | - Make / Model / Type of carburetor: | N/A |
| | 1.2.4 | Governor | |
| C | | - Make / Model / Type: | John Deere / FOCUS / Electronic Control |
| C | | - Governed range of engine speed from ____ to ____ ($min^{-1}$ (rev/min)): | 900 to 2200 |
| C | | - Rated engine speed ($min^{-1}$ (rev/min)): | 2100 |

| | | | |
|---|---|---|---|
| | 1.2.5 | Air Cleaner | |
| | | - Pre-cleaner | |
| C | | . Make / Model / Type: | Fleetguard / RE242336 / 25 tube precleaner with fan source scavenge |
| C | | . Location of air intake: | Under hood, middle of tractor |
| | | - Main cleaner | |
| | | . Make / Model / Type | |
| C | | - Primary: | Fleetguard / RE210102 / Opti-Air™ pleated paper media |
| C | | - Secondary: | Fleetguard / RE210103 / Pleated paper |
| C | | . Location of air intake (in case of no pre-cleaner): | Under hood, in front of cab |
| C | | - Maintenance indicator: | Console mounted warning light and audible signal |
| | 1.2.6 | Lubrication system | |
| D | | - Type of feed pump: | Full pressure, positive displacement |
| C | | - Type of filter(s): | Full Flow |
| C | | - Number of filter(s): | 1 top load |
| | 1.2.7 | Cooling system | |
| C | | - Type of coolant: | Liquid |
| D | | - Type of pump: | Centrifugal, gear driven |
| | | - Specification of fan or blower | |
| C | | . Number of fan blades: | 8 |
| C | | . Fan diameter (mm): | 788 |
| D | | - Coolant capacity ($dm^3$): | 40 |
| C | | - Type of temperature control: | Two thermostats and variable speed fan |
| D | | - Superpressure system (Kpa): | 69 +/- 6.9 |
| | 1.2.8 | Starting system | |
| C | | - Make / Model / Type: | Denso / RE529661 / Solenoid engaged |
| D | | - Starter motor power rating (kW): | 4.0 |
| C | | - Cold starting aid: | Ether spray in intake manifold |
| C | | - Safety device: | Electrical lockout on gearshift lever |
| | 1.2.9 | Electrical system | |
| C | | - Voltage (V): | 12 |
| | | - Generator | |
| C | | . Make / Model / Type: | Bosch/ RE210793 / Belt driven alternator with built-in regulator |
| D | | . Power (kW): | 2.8 |
| | | - Battery of accumulators | |
| C | | . Number: | Two; 950 CCA, RC 180 |
| D | | . Rating (Ah at ____ hours): | 154 Ah at 20 hours |

| | | | |
|---|---|---|---|
| | 1.2.10 | Exhaust system | |
| C | | - Make / Model / Type: | Fleetguard / RE210829 / Expansion Chamber |
| C | | - Location: | Vertical muffler, right front corner of cab |
| | **1.3** | Transmission | |
| | 1.3.1 | Clutch (travel and power take-off / travel alone) | |
| D | | - Make / Model / Type: | John Deere / Multiple plate / Oil cooled |
| D | | - Number of plates: | 7 |
| D | | - Diameter of plates (mm): | 232 |
| C | | - Method of operation: | Electro-Hydraulic; pedal actuated |
| | 1.3.2 | Gear box | |
| D | | - Make / Model / Type: | John Deere / 30K PST / 16 Speed full power shift |
| | | - Description: | Countershaft design consisting of 8 multiple disk hydraulically cooled clutches and multiple disk hydraulically cooled planetary brake |

| | Forward | Reverse |
|---|---|---|
| Number of ranges | NA | NA |
| Number of gears | 16 | 4 |
| Total of arrangements | N/A | N/A |

| | | | |
|---|---|---|---|
| D | | - Available options: | 16 x 5 (specialty market) |
| | 1.3.3 | Rear axle and final drives | |
| D | | - Make / Model / Type: | John Deere / AR221935 / Spiral bevel gear and pinion, differential and inboard planetary reduction |
| | | - Differential lock | |
| D | | . Type: | N/A |
| C | | . Method of engagement: | N/A |
| C | | . Method of disengagement: | N/A |
| | 1.3.4 | Front axle and final drives | |
| D | | - Make / Model / Type: | N/A |
| | | - Differential lock | |
| D | | . Type: | N/A |
| C | | . Method of engagement: | N/A |
| C | | . Method of disengagement: | N/A |

1.3.5 Total ratios and traveling speeds

| Gear No. | Group or range | Number of engine revolutions for one revolution of the driving wheels | Nominal traveling speed (*) at rated engine of 2100 $min^{-1}$ (rev / min) km/h |
|---|---|---|---|
| 1 | 1 | 416.493 | 1.47 |
| 2 | 2 | 310.956 | 1.96 |
| 3 | 3 | 233.563 | 2.61 |
| 4 | 4 | 174.380 | 3.50 |
| 5 | 5 | 155.491 | 3.93 |
| 6 | 6 | 134.864 | 4.53 |
| 7 | 7 | 116.090 | 5.26 |
| 8 | 8 | 100.691 | 6.06 |
| 9 | 9 | 87.197 | 7.00 |
| 10 | 10 | 75.630 | 8.07 |
| 11 | 11 | 65.102 | 9.38 |
| 12 | 12 | 56.466 | 10.81 |
| 13 | 13 | 47.910 | 12.74 |
| 14 | 14 | 35.770 | 17.06 |
| 15 | 15 | 26.867 | 22.72 |
| 16 | 16 | 20.059 | 30.43 |
| | | | |
| 1R | 1R | -445.253 | -1.37 |
| 2R | 2R | -166.228 | -3.67 |
| 3R | 3R | -144.177 | -4.64 [1] |
| 4R | 4R | -51.219 | -8.51 [2] |
| 5R | 5R | -51.219 | -11.92 [3] |
| | | | |

*(*) Calculated with drive wheel dynamic radius index of 771 mm*
[1] Travel Speed at 2300 engine rpm
[2] Travel Speed at 1500 engine rpm
[3] Specific market feature only

- Number of revolutions of front wheels for one revolution of rear-wheels (For 4WD tractors only): N/A

1.4 Power take-off (PTO)

1.4.1 Main power take-off

- Type (independent, semi-independent or not independent): Independent
- Method of engagement (if necessary describe the type of clutch): Electro-hydraulically actuated multi-plate wet clutch operated by single hand switch

| | | | |
|---|---|---|---|
| C | | - Number of shafts: | One |
| C | | - Method of changing power take-off shaft ends and speeds: | N/A |
| | 1.4.1.1 | Power take-off proportional to engine speed | |
| | | Power take-off at 540 $min^{-1}$ (rev / min) | |
| C | | - Location: | N/A |
| C | | - Diameter of power take-off shaft end (mm): | |
| C | | - Number of splines: (Conformity to ISO 500:1991) | |
| C | | - Height above ground (mm): | |
| C | | - Distance from the median plane of the tractor (mm): | |
| C | | - Distance behind rear-wheel axis (mm): | |
| C | | - PTO speed at rated engine speed ($min^{-1}$ (rev/min)): | |
| C | | - Engine speed at standard power take-off speed ($min^{-1}$ (rev/min)): | |
| C | | - Ratio of rotation speeds (engine speed / p.t.o. speed): | |
| D | | - Power restriction (kW): | |
| D | | - Maximum torque transmissible (Nm): | |
| C | | - Direction of rotation: (viewed from behind tractor) | |
| | | Power take-off at 1000 $min^{-1}$ (rev / min) | |
| C | | - Location: | Rear of tractor, center plane |
| C | | - Diameter of power take-off shaft end (mm): | 45 |
| C | | - Number of splines: (Conformity to ISO 500:1991) | 20; conforms to ISO 500 / 1991 |
| C | | - Height above ground (mm): | 800 |
| C | | - Distance from the median plane of the tractor (mm): | 0 |
| C | | - Distance behind rear-wheel axis (mm): | 583.3 |
| C | | - PTO speed at rated engine speed ($min^{-1}$ (rev/min)): | 1048 |
| C | | - Engine speed at standard power take-off speed ($min^{-1}$ (rev/min)): | 2003 |
| C | | - Ratio of rotation speeds (engine speed / p.t.o. speed): | 2.003 : 1 |
| D | | - Power restriction (kW): | None |
| D | | - Maximum torque transmissible (Nm): | None |
| C | | - Direction of rotation: (viewed from behind tractor) | Clockwise |

| | | | |
|---|---|---|---|
| | 1.4.1.2 | Power take-off proportional to ground speed | |
| C | | - Indicate 540 or 1000 $min^{-1}$ (rev / min): | N/A |
| C | | - Traveling distance for one revolution of take-off shaft (m): | N/A |
| C | | - Number of power take-off shaft revolutions for one revolution of (rear) driving wheels: | N/A |
| C | | - Direction of rotation with forward gear engaged (viewed from behind tractor): | N/A |
| | 1.4.2 | Optional power take-off | |
| C | | - Give the same description as for the main PTO: | N/A |
| | **1.5** | Hydraulic power lift | |
| C | | - Make / Model / Type: | John Deere / N/A / Electro-hydraulic lower link sensing; variable mix of draft and position control; adjustable rate of drop |
| C | | - Type of hydraulic system: | Closed center; pressure and flow compensated |
| C | | - Type and number of cylinders (single or double acting): | Two external, single acting (100 mm) |
| C | | - Type of linkage lock for transport: | Electro-hydraulic |
| D | | - Relief valve pressure setting (tolerance) (MPa): | 20.4 +/- 0.3 |
| D | | - Opening pressure of cylinder safety valve (if fitted) (MPa): | 23.25 +/- 0.5 |
| D | | - Lift pump type: | Closed center, load sensing pressure-flow compensated axial piston pump with partial flow charge pump with combined return flow charge |
| D | | - Transmission between pump and engine: | Gear driven; Rear Differential case hypoid gear set |
| C | | - Type and number of filters: | Synthetic spin on filter; one |
| C | | - Site of oil reservoir: | Differential case housing |
| C | | - Type, number, and location of tapping points: | ISO standard breakaway couplers / 3 standard with 4th, 5th, and power beyond optional; rear of tractor |
| D | | - Maximum volume of oil available to external cylinders ($dm^3$): | 25; Optional 50 |

## 1.6 Three point linkage

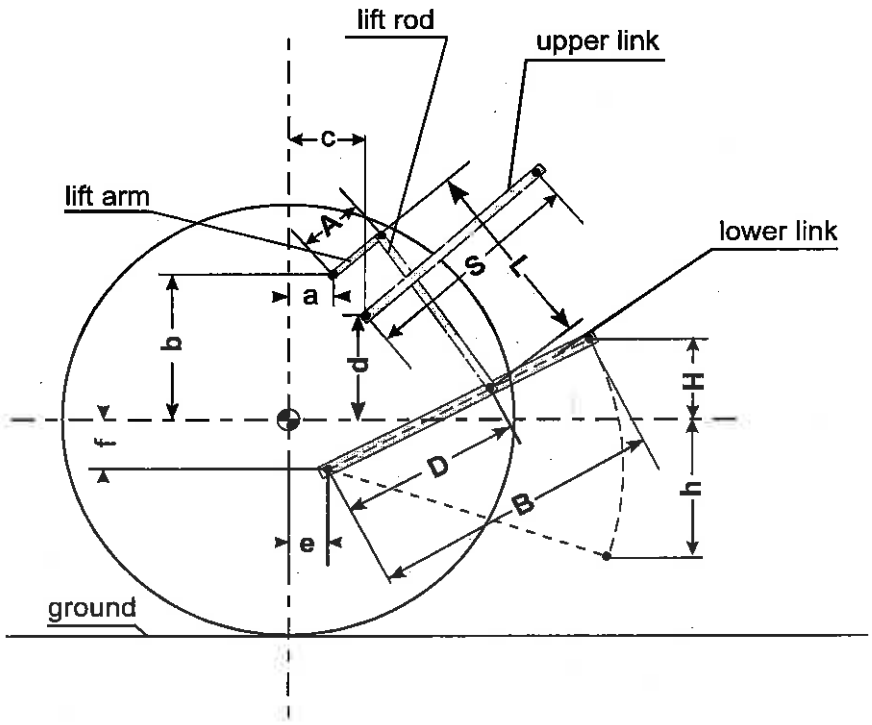



Figure 2.1
**Lift Test – Linkage geometry**

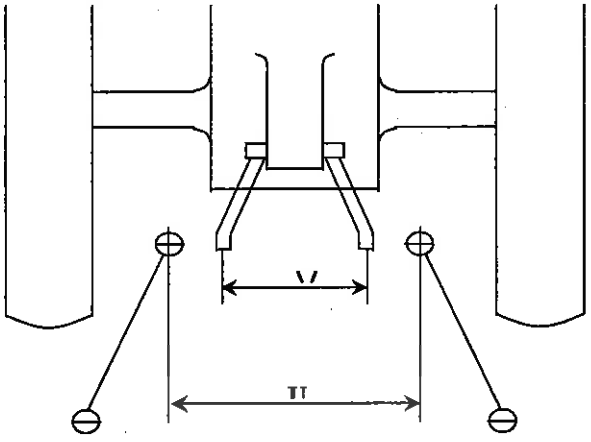



Figure 2.2
**Lift Test – Linkage geometry**

| | | |
|---|---|---|
| C | - Category:<br>• *Conformity with categories 1, 2, 3, 4, 3N, or 4N of ISO 730-1:1994 + Cor.1:1995 and ISO 730-2:1979* | 3<br>Specific Market Version |
| C | - Category adapter: | None |

| | | | Dimension or range | Settings used in test(s) |
|---|---|---|---|---|
| | | | | |
| | | | mm | mm |
| C | Length of arms: | (A) | 520 | Same |
| C | Length of lower links: | (B) | 1081 | Same |
| | Distance of lift arm pivot point from rear wheel axis | | | |
| C | - horizontally: | (a) | 230 | Same |
| C | - vertically: | (b) | 480 | Same |
| C | Horizontal distance between the 2 lower link points: | (u) | 871 | Same |
| C | Horizontal distance between the 2 lift arm end points: | (v) | 758 | Same |
| C | Length of upper arm link: | (S) | 727 to 906 | 800 |
| | Distance of upper link pivot point from rear wheel axis | | | |
| C | - horizontally: | (c) | 555 | Same |
| C | - vertically: | (d) | 304 | Same |
| | Distance of lower link pivot point from rear wheel axis | | | |
| C | - horizontally: | (e) | 276 | Same |
| C | - vertically: | (f) | 365 | Same |
| C | Distance of lower link pivot points to lift rod pivot points on lower links: | (D) | 733 | Same |
| C | Length of lift rods: | (L) | 1028 to 1120 | 1060 |
| | Height of lower hitch points relative to the rear wheel axis | | | |
| C | - in low position: | (h) | 590 – 739 | 650 |
| C | - in high position: | (H) | 119 – 237 | 204 |
| C | Height above ground of lower hitch points when locked in transport position (*): | | 1010 – 1127 | 1084 |
| | (*) Assuming r = 880 mm | | | |

Table 1.1

**Dimensions of linkage geometry when connected to the standard frame**

| | | | |
|---|---|---|---|
| | 1.7 | Swinging drawbar | |
| C | | - Type: | Oscillating |
| | | - Height above ground | |
| C | | . Minimum (mm): | 482 |
| C | | . Maximum (mm): | 580 |
| C | | - Type of adjustment: | Offset drawbar |
| | | - Distance of hitch point from rear wheel axis | |
| C | | . Horizontally (mm): | 1040, 1091 |
| | | - Distance of hitch point from power take-off shaft end | |
| C | | . Horizontally (mm): | 508, 457 |
| C | | . Vertically (mm): | 220, 318 |
| C | | - Lateral adjustment (center of clevis) | |
| C | | . Left hand (mm): | 213, 205 |
| C | | . Right hand (mm): | 213, 205 |
| | | - Distance of pivot point from rear wheel axis | |
| C | | . Horizontally (mm): | 290.5 (forward) |
| C | | - Diameter of drawbar pinhole (mm): | 40.3 |
| D | | - Maximum vertical permissible load (kN): | 18.0 kN – standard (as tested)<br>48.9 kN – optional |
| | 1.8 | **Trailer hitch** | |
| C | | - Type: | N/A |
| C | | - Hole diameter (mm): | |
| C | | - Height above ground (mm): | |
| | | - Distance of hitch point from rear wheel axis | |
| C | | . Horizontally (mm): | |
| | | - Distance of hitch point from take-off shaft end | |
| C | | . Horizontally (mm): | |
| C | | . Vertically (mm): | |
| D | | - Maximum vertical permissible load (kN): | |
| | 1.9 | Holed drawbar | |
| C | | - Number of holes: | |
| C | | - Distance between holes (mm): | |
| C | | - Hole diameter (mm): | |
| C | | - Thickness / width of the drawbar (mm /mm): | |
| | | - Height above ground | |
| C | | . Minimum (mm): | |
| C | | . Maximum (mm): | |
| C | | - Horizontal distance to power take-off shaft end (rear) (mm): | |

| | | | |
|---|---|---|---|
| | **1.10** | Steering | |
| **D** | | - Make / Model / Type: | John Deere Hydrostatic Differential Steering / N/A / Electro-hydraulic differential steering controlled by steering wheel |
| | | - Method of operation | |
| **D** | | . Pump(s): | Same as main hydraulic pump |
| **D** | | . Rams(s): | Integrated symmetrical design |
| **D** | | - Working pressure (MPa): | 20.7 |
| | **1.11** | **Brakes** | |
| | 1.11.1 | Service brake | |
| **D** | | - Make / Model / Type: | Vickers / RE211865 / John Deere Oil immersed |
| **C** | | - Method of operation: | Hydraulic, operated by foot pedal |
| **C** | | - Trailer braking take-off (hydraulic or air brakes): | Optional air or hydraulic (not installed) |
| | 1.11.2 | Parking brake | |
| **C** | | - Type: | Spring applied; hydraulically released multiple disk |
| **C** | | - Method of operation: | Gear selector lever |
| | **1.12** | **Wheels** | |
| | | - Number | |
| **C** | | . Front (driving / steering): | None |
| **C** | | . Rear (driving / steering): | Two; Driving and steering |
| **C** | | - Wheelbase (mm): | 2261 |
| | | - Track width adjustment: | |

| | Minimum mm | Maximum mm | Adjustment Method |
|---|---|---|---|
| **D** Rear | 2335 | 3035 | 8 positions available by adjusting track frame and rear wheel: 2335, 2435, 2485, 2535, 2635, 2735, 2835, 3035 |

| | | | |
|---|---|---|---|
| | **1.13** | **Protective structure** | |
| **C** | | - Make / Model / Type: | John Deere/CG005/Cab |
| **C** | | - Manufacturer's name and address: | John Deere Waterloo Works Waterloo, Iowa, USA |
| | | - Protective device | |
| **C** | | . Cab / frame / rollguard / other: | Cab |
| **C** | | . Tiltable / not tiltable: | Not tiltable |
| | | - OECD approval | |
| **C** | | . approval number: | 4/0 916 |
| **C** | | . Date of approval: | 8 November 2005 |
| **C** | | . Nos. of minor modification certificates, if any: | None |

| | | | |
|---|---|---|---|
| | **1.14** | **Seat(s)** | |
| | 1.14.1 | Driver's seat | |
| C | | - Make / Model / Type | John Deere/ Sears Manufacturing / Comfort Command / air cushion suspension |
| C | | - Seat and steering wheel reversible: Yes / No | No |
| C | | - Type of suspension: | Air ride |
| C | | - Type of damping: | Adjustable viscous damping |
| | | - Range of adjustment | |
| C | | . Longitudinally (mm): | 178 |
| C | | . Vertically (mm): | 172 |
| C | | - Safety belt: | Yes |
| | | . Type: | 2 point, fully retractable |
| | 1.14.2. | Optional driver's seat(s) | |
| | 1.14.2.1 | Option 1 | |
| D | | - Make / Model / Type | |
| D | | - Type of suspension: | |
| D | | - Type of damping: | |
| | | - Range of adjustment | |
| D | | . Longitudinally (mm): | |
| D | | . Vertically (mm): | |
| | 1.14.2.2 | Option 2 | |
| D | | - Make / Model / Type | |
| D | | - Type of suspension: | |
| D | | - Type of damping: | |
| | | - Range of adjustment | |
| D | | . Longitudinally (mm): | |
| D | | . Vertically (mm): | |
| | 1.14.3 | Passenger seat | |
| C | | - Location: | Optional Instruction seat located left of driver's seat |
| C | | - Capacity (number) | One |
| | | | |

## 1.15 Lighting

| | Height above ground of centre | Size | Distance from outside edge of lights to median plane of tractor |
|---|---|---|---|
| | mm | mm | mm |
| Headlights | | | |
| Inner Pair | 1719 | 155 x 110 | 238 |
| Outer Pair | 1719 | 122 x 86 | 376 |
| | | | |
| Sidelights | | | |
| Midbody | 2392 | 160 x 110 | 700 |
| | | | |
| Rearlights | | | |
| Roof | 2991 | 160 x 110 | 508 |
| Fender | 2220 | 160 x 110 | 914 |
| | | | |
| Reflectors | | | |
| Front | 2972 | 180 x 72 | 736 |
| Rear | 2972 | 180 x 72 | 743 |
| Brake | 1948 | 210 x 95 | 910 |
| Extremity | 2274 | 140 x 72 | 1855 |

## 2. TEST CONDITIONS

Separate tables may be added to report other test conditions or equipments.

### 2.1 Overall dimensions

| | Length | Width | | Height at top of: | |
|---|---|---|---|---|---|
| | | minimum | maximum | protective structure | exhaust pipe |
| | mm | mm | Mm | mm | mm |
| Ballasted | 6373 | 3410 | 3492 | 3200 | 3266 |
| Unballasted | 5813 | 3410 | 3492 | 3200 | 3266 |

### 2.2 Ground clearance (unballasted tractor)

(mm): 390

- Clearance – limiting part: Drawbar safety support

### 2.3 Tractor mass

- Mass (with cab)

| | Without driver | With driver |
|---|---|---|
| | kg | kg |
| Unballasted | | |
| Total | 12356 | 12431 |
| Ballasted | | |
| Total | 13131 | 13206 |

| Ballast Added | Number of Weights | Total Mass |
|---|---|---|
| | | kg |
| Weight bracket | 1 | 171 |
| Front weights | 12 | 604 |

### 2.4 Track specifications

| | |
|---|---|
| Track materials: | Rubber with steel reinforcement |
| Track width and base (mm): | 457.2 and 2261 |
| Dynamic radius (rolling radius) (mm): | 771 |
| Track support system: | Oscillating front idler & three mid-rollers supported by midframe and rear wheel attached to drive axle |
| Treadbars | |
| . Number of treadbars per metre: | 5.706 |
| . Height, width, and length (mm): | 66.5, 57 (top of bar), and 165 (top of bar) |
| Other specifications: | Camoplast DURABUILT 3500 – standard<br>Camoplast DURABUILT 5500 – as tested |

## 2.5 Tyres and track specifications

| | Front | Rear |
|---|---|---|
| Tyres | | |
| - dimensions: | | |
| - ply rating: | | |
| - type: | | |
| - maximum load (tyre manufacturer's) (kN): | | |
| - maximum load (tractor manufacturer's) (kN): | | |
| - inflation pressure (tyre manufacturer's) (kPa): | | |
| - dynamic radius index (mm): | | |
| Chosen track width (mm): | 2335 | |

## 2.6 Fuel

- Type: No. 2 Diesel in conformity with national standards
  - *in conformity / not in conformity with national standards*
- Density at 15° C: 0.839 kg/l

## 2.7 Oil and lubricants

### 2.7.1 Capacity and change interval

| | Capacity | Oil Change | Filter change |
|---|---|---|---|
| | $Dm^3$ | H | h |
| Engine | 24 | 250 (375 with John Deere PLUS-50 and John Deere filter) | Same |
| Gear Box | 246 | 1500 | 750 |
| Front Axle | N/A | N/A | N/A |
| Rear Axle | Common w/gearbox | 1500 | Common w/gearbox |
| Final Drive (front) | N/A | N/A | N/A |
| Final Drive (rear) | Common w/gearbox | 1500 | Common w/gearbox |
| Hydraulic System (*) | Common w/gearbox | 1500 | Common w/gearbox |
| Steering | Common w/gearbox | 1500 | 750 |
| (*) State if common with gear box and rear axle. | | | |

2.7.2 Specifications (SAE, API, CCMC, ACEA, Mil.L, ISO)

| | Recommended | Used during test |
|---|---|---|
| **Engine oil** | | |
| . Type: | John Deere; Torq-Gard Supreme SAE 5W30: PLUS-50 SAE 15W40 or 0W40 | John Deere; Torq-Gard Supreme SAE 15W40 |
| . Viscosity: | 12.5 - 16.3 cSt @ 100 C | 12.5 - 16.3 cSt @ 100 C |
| . Classifications: | API CF-4; CH - 4; ACEA E2 | Same |
| **Transmission oils** | | |
| . Type: | John Deere HY-GARD; J20C SAE 10W-30 | Same |
| . Viscosity: | 58 cSt at 43 C | Same |
| . Classifications: | NA | NA |
| **Hydraulic fluid** | | |
| . Type: | Same as transmission | Same |
| . Viscosity: | | |
| . Classifications: | | |
| **Steering oil** | | |
| . Type: | Same as transmission | Same |
| . Viscosity: | | |
| . Classifications: | | |

2.7.3 Grease

- Number of lubrication points: 16

## 3. COMPULSORY TESTS RESULTS

### 3.1 Main power take-off

- Date and location of tests: 29-Sep-06 Nebraska Tractor Test Laboratory, Lincoln, NE, USA
- Type of dynamometer bench: Eaton

| Power | Speed | | | Fuel consumption | | | Specific energy |
|---|---|---|---|---|---|---|---|
| | Engine | PTO | Fan | Hourly | | Specific | |
| kW | rev/min | | | kg/h | l/h | g/kWh | kW-h/l |
| 3.1 MAXIMUM POWER - ONE HOUR TEST | | | | | | | |
| 173.41 | 1800 | 897 | 1182 | 39.95 | 47.61 | 230 | 3.64 |
| 3.1.2 POWER AT RATED ENGINE SPEED | | | | | | | |
| 151.28 | 2099 | 1047 | 1136 | 36.73 | 43.77 | 243 | 3.46 |
| 3.1.3 STANDARD POWER TAKE-OFF SPEED (1000 +/- 25 rev/min | | | | | | | |
| 163.36 | 2006 | 1000 | 1129 | 38.16 | 45.48 | 234 | 3.59 |
| 3.1.4 PART LOADS | | | | | | | |
| 3.1.4.1 the torque corresponding to maximum power at rated engine speed | | | | | | | |
| 151.28 | 2099 | 1047 | 1136 | 36.73 | 43.77 | 243 | 3.46 |
| 3.1.4.2 85% of torque obtained in 3.1.4.1 | | | | | | | |
| 131.98 | 2154 | 1074 | 1178 | 33.57 | 40.01 | 254 | 3.30 |
| 3.1.4.3 75% of torque defined in 3.1.4.2 | | | | | | | |
| 99.90 | 2166 | 1080 | 1177 | 28.21 | 33.63 | 282 | 2.97 |
| 3.1.4.4 50% of torque defined in 3.1.4.2 | | | | | | | |
| 66.30 | 2174 | 1084 | 1183 | 22.27 | 26.54 | 336 | 2.50 |
| 3.1.4.5 25% of torque defined in 3.1.4.2 | | | | | | | |
| 33.70 | 2186 | 1090 | 1198 | 15.88 | 18.92 | 471 | 1.78 |
| 3.1.4.6 unloaded | | | | | | | |
| 1.01 | 2193 | 1094 | 1193 | 12.75 | 15.19 | 12624 | 0.07 |
| 3.1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED (1000 +/- 25 rev/min) | | | | | | | |
| 3.1.5.1 the torque corresponding to maximum power at standard PTO speed | | | | | | | |
| 163.36 | 2006 | 1000 | 1129 | 38.16 | 45.48 | 234 | 3.59 |
| 3.1.5.2 85% of torque obtained in 3.1.5.1 | | | | | | | |
| 142.95 | 2066 | 1030 | 1116 | 34.88 | 41.57 | 244 | 3.44 |
| 3.1.5.3 75% of torque defined in 3.1.5.2 | | | | | | | |
| 107.78 | 2077 | 1036 | 1126 | 28.85 | 34.38 | 268 | 3.13 |
| 3.1.5.4 50% of torque defined in 3.1.5.2 | | | | | | | |
| 72.57 | 2088 | 1041 | 1131 | 22.63 | 26.98 | 312 | 2.69 |
| 3.1.5.5 25% of torque defined in 3.1.5.2 | | | | | | | |
| 36.49 | 2102 | 1048 | 1138 | 15.51 | 18.49 | 425 | 1.97 |
| 3.1.5.6 unloaded | | | | | | | |
| 1.05 | 2111 | 1052 | 1142 | 11.48 | 13.68 | 10976 | 0.08 |

| | | |
|---|---|---|
| - No load maximum engine speed: | 2193 | rev/min |
| - Torque (equivalent crankshaft) at rated speed: | | |
| - At rated engine speed | 688 | Nm |
| - At maximum power | 920 | Nm |
| - Maximum torque (equivalent crankshaft): | 1013 | Nm |
| (engine speed: | 1502 | rev/min) |

| | | |
|---|---|---|
| Mean atmospheric conditions: | | |
| Dry bulb | 24 | °C |
| Pressure | 97.4 | kPa |
| Relative Humidity | 35 | % |
| Maximum temperatures: | | |
| Coolant | 96 | °C |
| Engine oil | 117 | °C |
| Fuel | 50 | °C |
| Engine air intake | 36 | °C |

## 3. COMPULSORY TESTS RESULTS

### 3.1 Main power take-off

- Date and location of tests: 29-Sep-06 Nebraska Tractor Test Laboratory, Lincoln, NE, USA
- Type of dynamometer bench: Eaton

| Power | Speed | | | Fuel consumption | | | Specific energy |
|---|---|---|---|---|---|---|---|
| | | | | Hourly | | Specific | |
| kW | Engine | PTO | Fan | kg/h | l/h | g/kWh | kW-h/l |
| 3.1.6 PART LOADS AT DIFFERENT ENGINE SPEEDS | | | | | | | |
| 3.1.6.1 maximum power at rated engine speed | | | | | | | |
| 151.28 | 2099 | 1047 | 1136 | 36.73 | 43.77 | 243 | 3.46 |
| 3.1.6.2 80% of power obtained in 3.1.6.1 at max speed setting | | | | | | | |
| 120.92 | 2158 | 1076 | 1174 | 31.93 | 38.06 | 264 | 3.18 |
| 3.1.6.3 80% of power obtained in 3.1.6.1 with governor control set to 90% of rated engine speed | | | | | | | |
| 120.90 | 1892 | 943 | 1032 | 29.57 | 35.25 | 245 | 3.43 |
| 3.1.6.4 40% of power obtained in 3.1.6.1 with governor control set to 90% of rated engine speed | | | | | | | |
| 60.58 | 1892 | 943 | 1021 | 18.42 | 21.95 | 304 | 2.76 |
| 3.1.6.5 60% of power obtained in 3.1.6.1 with governor control set to 60% of rated engine speed | | | | | | | |
| 91.06 | 1264 | 630 | 702 | 20.73 | 24.71 | 228 | 3.69 |
| 3.1.6.6 40% of power obtained in 3.1.6.1 with governor control set to 60% of rated engine speed | | | | | | | |
| 60.59 | 1262 | 629 | 695 | 15.74 | 18.76 | 260 | 3.23 |

## 3.2 HYDRAULIC POWER AND LIFTING FORCE

### 3.2.1 Hydraulic Power Test – 45 cc pump

Date of Test: 2-Oct-06 Location of Test-City-State: Tractor Test Lab, Lincoln, NE, USA

Tractor Model: John Deere 8230T Tapping point used for test: Remote hydraulic outlets

#### 3.2.1.1 Hydraulic Fluid Characteristics

Found in: **2.7.2 Specifications**

Viscosity at 65C - 25 cSt

#### 3.2.1.2 Compulsory Report(Test Results):

| | Pressure | Reservoir oil Temperature | Engine Speed | Flow Rate | Power |
|---|---|---|---|---|---|
| | MPa | °C | rev/min$^{-1}$ | l/min | kW |
| Rated Engine Speed: (Manufactures Specification) | | | 2100 | | |
| Maximum (sustained) pressure with relief valve open as measured at the coupler Pump stalled: Yes | 20.80 | 74 | 2190 | | |
| Flow rate corresponding to a hydraulic pressure equivalent to 90 percent of the actual relief valve pressure setting and corresponding hydraulic power through two coupler pairs: | 18.55 | 73 | 2177 | 126.4 | 39.1 |
| Maximum available flow from one coupler pair: | 5.11 | 73 | 2188 | 134.4 | 11.4 |
| Maximum available power from one coupler pair: | 14.59 | 79 | 2177 | 124.5 | 30.3 |
| Maximum available flow from coupler pairs operating simultaneously (flow through two or more coupler pairs if required): | 1.59 | 67 | 2190 | 137.0 | 3.6 |
| Maximum power from coupler pairs operating simultaneously (flow through two or more coupler pairs if required): | 18.97 | 73 | 2178 | 124.9 | 39.5 |

## 3.2 HYDRAULIC POWER AND LIFTING FORCE

### 3.2.1 Hydraulic Power Test – 57 cc pump

Date of Test: 2-Oct-06 Location of Test-City-State: Tractor Test Lab, Lincoln, NE, USA

Tractor Model: John Deere 8330T Tapping point used for test: Remote hydraulic outlets

#### 3.2.1.1 Hydraulic Fluid Characteristics

Found in: **2.7.2 Specifications**

Viscosity at 65C - 25 cSt

#### 3.2.1.2 Compulsory Report(Test Results):

| | Pressure | Reservoir oil Temperature | Engine Speed | Flow Rate | Power |
|---|---|---|---|---|---|
| | MPa | °C | rev/min$^{-1}$ | l/min | kW |
| Rated Engine Speed: (Manufactures Specification) | | | 2100 | | |
| Maximum (sustained) pressure with relief valve open as measured at the coupler Pump stalled: Yes | 20.82 | 81 | 2192 | | |
| Flow rate corresponding to a hydraulic pressure equivalent to 90 percent of the actual relief valve pressure setting and corresponding hydraulic power through two coupler pairs: | 18.68 | 81 | 2183 | 128.7 | 40.1 |
| Maximum available flow from one coupler pair: | 4.43 | 79 | 2099 | 143.8 | 10.6 |
| Maximum available power from one coupler pair: | 13.77 | 84 | 2181 | 132.5 | 30.4 |
| Maximum available flow from coupler pairs operating simultaneously (flow through two or more coupler pairs if required): | 2.21 | 72 | 2190 | 168.5 | 6.2 |
| Maximum power from coupler pairs operating simultaneously (flow through two or more coupler pairs if required): | 17.66 | 80 | 2178 | 157.9 | 46.5 |

3.2.2 POWER LIFT TEST Category III, Specific Market, Walterscheid lower links.
Date of test: 19 June 2006.

| | Hitch points | Frame |
|---|---|---|
| Lower hitch points above ground - down position: | 229 mm | 246 mm |
| Vertical movement - without load: | 854 mm | 875 mm |
| with load: | 806 mm | 813 mm |
| Maximum corrected force exerted through full range: | 65.6 kN | 72.3 kN |
| Corresponding pressure: | 18.8 MPa | 18.8 MPa |
| Moment about rear axle: | 89.1 kNm | 142.4 kNm |
| Maximum mast tilt angle | -- | *2.3 degrees |

Lifting height relative to horizontal position of lower links.

| mm | | -370 | -353 | -299 | -200 | -100 | 0 | 100 | 200 | 300 | 400 | 436 | 460 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Corrected lift forces | | | | | | | | | | | | | |
| At the hitch point | kN | 65.6 | -- | 67.7 | 71.2 | 74.3 | 77.0 | 79.0 | 80.0 | 82.7 | 84.7 | 86.0 | -- |
| At the frame | kN | -- | 73.9 | -- | 73.5 | 74.3 | 74.9 | 75.6 | 75.3 | 74.4 | 73.3 | 72.6 | 72.3 |
| Corresponding pressure | 18.8 | MPa | | | | | | | | | | | |

*Maximum tilt angle available with settings on tractor

## OECD Drawbar Data (SI)

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date of tests:** | 04, 06-Oct-06 | | | | | **Fuel density:** | 0.839 kg/l | | | | | | | | |
| **Type of track:** | Concrete | | | | | **Test number:** | 1886 | | | | | | | | |
| **3.3.1 Maximum power in tested gears (unballasted, CRWL)** | | | | | | | **Tire pressure:** | 0 kPa, rear | 0 kPa, front | | | **Drawbar Height:** | 470 mm | | |
| **Gear** | **Gear Designation** | **Power** | **Drawbar pull** | **Speed** | **Engine speed** | **Slip of wheels and/or tracks** | **Fan speed** | **Fuel** | | **Temperature** | | | **Atmospheric conditions** | | |
| | | | | | | | | **Specific fuel consumption** | **Specific energy** | **Fuel** | **Coolant** | **Oil** | **Temperature** | **Relative humidity** | **Pressure** |
| | | kW | kN | km/h | $min^{-1}$ | % | $min^{-1}$ | g/kW.h | kW.h/l | °C | °C | °C | °C | % | kPa |
| *4 | 4 | 94.16 | 105.65 | 3.21 | 2154 | 12.6 | 1005 | 354 | 2.37 | 49 | 83 | 104 | 21 | 64 | 98.6 |
| *5 | 5 | 108.45 | 108.31 | 3.60 | 2144 | 11.5 | 1009 | 331 | 2.54 | 46 | 82 | 104 | 14 | 68 | 98.6 |
| 6 | 6 | 117.83 | 103.23 | 4.11 | 2084 | 10.0 | 1023 | 314 | 2.67 | 47 | 84 | 106 | 16 | 65 | 98.6 |
| 7 | 7 | 128.89 | 96.60 | 4.80 | 2031 | 7.1 | N/A | 294 | 2.85 | 50 | 83 | 105 | 14 | 84 | 98.6 |
| 8 | 8 | 136.37 | 91.38 | 5.37 | 1949 | 6.1 | 996 | 285 | 2.94 | 51 | 86 | 107 | 16 | 79 | 98.6 |
| 9 | 9 | 143.62 | 88.48 | 5.84 | 1825 | 5.6 | 872 | 279 | 3.01 | 52 | 89 | 109 | 18 | 66 | 98.6 |
| 10 | 10 | 145.78 | 77.65 | 6.76 | 1800 | 3.9 | 873 | 275 | 3.05 | 53 | 92 | 112 | 19 | 59 | 98.6 |
| 11 | 11 | 146.99 | 66.38 | 7.97 | 1799 | 2.4 | 853 | 271 | 3.09 | 51 | 93 | 112 | 19 | 63 | 98.7 |
| 12 | 12 | 147.46 | 57.33 | 9.26 | 1799 | 1.6 | 844 | 272 | 3.08 | 52 | 94 | 114 | 20 | 60 | 98.7 |
| 13 | 13 | 146.54 | 48.13 | 10.96 | 1798 | 1.2 | 784 | 274 | 3.06 | 52 | 94 | 114 | 21 | 57 | 98.7 |
| 14 | 14 | 139.32 | 34.05 | 14.73 | 1796 | 0.7 | N/A | 287 | 2.93 | 53 | 97 | 115 | 23 | 55 | 98.8 |
| * Note: Slip within operating procedures of testing station. | | | | | | | | | | | | | | | |
| **3.3.2 Fuel consumption** | | | | | | | | | | | | | | | |
| 3.3.2.1 | | In selected gear/speed setting nearest 7.5 km/hr, at maximum power at rated engine speed | | | | | | | | | | | | | |
| 9 | 9 | 127.31 | 65.89 | 6.96 | 2099 | 2.3 | 998 | 291 | 2.89 | 50 | 84 | 106 | 17 | 75 | 98.6 |
| 3.3.2.1.1 | | 75% of pull corresponding to maximum power at rated engine speed | | | | | | | | | | | | | |
| 9 | 9 | 98.85 | 49.38 | 7.21 | 2154 | 1.3 | 1009 | 323 | 2.59 | 47 | 82 | 104 | 17 | 66 | 98.6 |
| 3.3.2.1.2 | | 50% of pull corresponding to maximum power at rated engine speed | | | | | | | | | | | | | |
| 9 | 9 | 66.61 | 32.90 | 7.29 | 2166 | 0.7 | 1022 | 386 | 2.17 | 48 | 80 | 103 | 17 | 62 | 98.6 |
| 3.3.2.1.3 | | Highest gear/speed setting at reduced engine speed able to achieve both 3.3.2.1.1 and 3.3.2.1.2; same pull and traveling speed as in 3.3.2.1.1 | | | | | | | | | | | | | |
| 11 | 11 | 98.78 | 49.38 | 7.20 | 1607 | 1.3 | 840 | 299 | 2.81 | 48 | 86 | 103 | 18 | 63 | 98.6 |
| 3.3.2.1.4 | | Same gear/speed selection as 3.3.2.1.3 at reduced engine speed; same pull and traveling speed as in 3.3.2.1.2 | | | | | | | | | | | | | |
| 11 | 11 | 66.57 | 32.91 | 7.28 | 1615 | 0.7 | 844 | 339 | 2.47 | 47 | 82 | 99 | 18 | 62 | 98.6 |
| 3.3.2.2 | | In selected gear/speed setting nearest between 7 km/hr and 10 km/hr at rated engine speed | | | | | | | | | | | | | |
| 11 | 11 | 125.38 | 47.93 | 9.42 | 2100 | 1.2 | 741 | 293 | 2.86 | 51 | 86 | 109 | 19 | 59 | 98.7 |
| 3.3.2.2.1 | | 75% of pull corresponding to maximum power at rated engine speed | | | | | | | | | | | | | |
| 11 | 11 | 97.13 | 36.02 | 9.71 | 2156 | 0.8 | 181 | 335 | 2.51 | 50 | 85 | 106 | 22 | 54 | 98.7 |
| 3.3.2.2.2 | | 50% of pull corresponding to maximum power at rated engine speed | | | | | | | | | | | | | |
| 11 | 11 | 65.41 | 24.06 | 9.79 | 2166 | 0.5 | 181 | 417 | 2.01 | 50 | 82 | 104 | 22 | 54 | 98.7 |
| 3.3.2.2.3 | | Highest gear/speed setting at reduced engine speed able to achieve both 3.3.2.2.1 and 3.3.2.2.2; same pull and traveling speed as in 3.3.2.2.1 | | | | | | | | | | | | | |
| 13 | 13 | 97.12 | 36.05 | 9.70 | 1584 | 0.7 | 181 | 307 | 2.74 | 51 | 93 | 108 | 23 | 51 | 98.7 |
| 3.3.2.2.4 | | Same gear/speed setting 3.3.2.2.3 at reduced engine speed; same pull and traveling speed as in 3.3.2.2.2 | | | | | | | | | | | | | |
| 13 | 13 | 65.52 | 24.06 | 9.80 | 1597 | 0.5 | 184 | 357 | 2.35 | 50 | 84 | 102 | 22 | 54 | 98.7 |

## OECD Drawbar Data (SI)

| Date of tests: | 04, 06-Oct-06 | Fuel density: | 0.839 kg/l |
|---|---|---|---|
| Type of track: | Concrete | Test number: | 1886 |

| 4.1 Maximum power in tested gears (unballasted, CRWL) | Tire pressure: | 0 kPa, rear | 0 kPa, front | Drawbar Height: | 470 mm |
|---|---|---|---|---|---|

| Gear | Gear Designation | Power | Drawbar pull | Speed | Engine speed | Slip of wheels and/or tracks | Fan speed | Fuel | | Temperature | | | Atmospheric conditions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Specific fuel consumption | Specific energy | Fuel | Coolant | Oil | Temperature | Relative humidity | Pressure |
| | | kW | kN | km/h | $min^{-1}$ | % | $min^{-1}$ | g/kW.h | kW.h/l | °C | °C | °C | °C | % | kPa |
| *4 | 4 | 93.91 | 105.40 | 3.21 | 2154 | 12.6 | 1006 | 353 | 2.37 | 48 | 83 | 103 | 21 | 64 | 98.6 |
| *5 | 5 | 107.46 | 107.28 | 3.61 | 2149 | 11.7 | 1007 | 331 | 2.54 | 46 | 82 | 105 | 14 | 68 | 98.6 |
| 6 | 6 | 118.06 | 101.41 | 4.19 | 2100 | 8.9 | 1017 | 313 | 2.68 | 46 | 83 | 106 | 15 | 69 | 98.6 |
| 7 | 7 | 124.86 | 88.48 | 5.08 | 2099 | 5.0 | N/A | 296 | 2.83 | 49 | 82 | 104 | 14 | 83 | 98.6 |
| 8 | 8 | 127.75 | 77.32 | 5.95 | 2099 | 3.4 | N/A | 289 | 2.90 | 50 | 82 | 105 | 15 | 84 | 98.6 |
| 9 | 9 | 127.31 | 65.89 | 6.96 | 2099 | 2.3 | 998 | 291 | 2.89 | 50 | 84 | 106 | 17 | 75 | 98.6 |
| 10 | 10 | 127.82 | 56.97 | 8.08 | 2101 | 1.6 | 998 | 289 | 2.91 | 50 | 85 | 106 | 19 | 59 | 98.6 |
| 11 | 11 | 125.38 | 47.93 | 9.42 | 2100 | 1.2 | N/A | 293 | 2.86 | 51 | 86 | 109 | 19 | 59 | 98.7 |
| 12 | 12 | 123.83 | 40.98 | 10.88 | 2098 | 0.9 | N/A | 300 | 2.80 | 49 | 87 | 109 | 20 | 60 | 98.7 |
| 13 | 13 | 121.72 | 34.11 | 12.85 | 2097 | 0.7 | N/A | 305 | 2.75 | 50 | 89 | 112 | 21 | 60 | 98.7 |

* Note: Slip within procedures of testing station.

## OECD Drawbar Data (SI)

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date of tests:** | 09-Oct-06 | | | | | **Fuel density:** | 0.839 kg/l | | | | | | | |
| **Type of track:** | Concrete | | | | | **Test number:** | 1886 | | | | | | | |
| **4.2 Maximum power in tested gears (ballasted, CRWL)** | | | | | | | **Tire pressure:** | 0 kPa, rear | 0 kPa, front | | | **Drawbar Height:** | 483 mm | |
| **Gear Number and range** | **Power** | **Drawbar pull** | **Speed** | **Engine speed** | **Slip of wheels and/or tracks** | **Fan speed** | **Fuel** | | **Temperature** | | | **Atmospheric conditions** | | |
| | | | | | | | **Specific fuel consumption** | **Specific energy** | **Fuel** | **Coolant** | **Oil** | **Temperature** | **Relative humidity** | **Pressure** |
| | kW | kN | km/h | $min^{-1}$ | % | $min^{-1}$ | g/kW.h | kW.h/l | °C | °C | °C | °C | % | kPa |
| 5 | 113.94 | 119.66 | 3.43 | 2082 | 13.6 | 1015 | 325 | 2.58 | 47 | 82 | 105 | 11 | 59 | 98.6 |
| 6 | 125.24 | 111.89 | 4.03 | 2027 | 9.5 | 996 | 304 | 2.76 | 47 | 83 | 106 | 11 | 65 | 98.6 |
| 7 | 136.48 | 103.76 | 4.74 | 1983 | 6.4 | 927 | 283 | 2.96 | 47 | 83 | 105 | 11 | 65 | 98.6 |
| 8 | 142.73 | 96.38 | 5.33 | 1910 | 5.2 | 974 | 276 | 3.04 | 47 | 84 | 106 | 12 | 60 | 98.6 |
| 9 | 147.43 | 90.57 | 5.86 | 1801 | 4.2 | 920 | 270 | 3.10 | 48 | 87 | 108 | 12 | 65 | 98.6 |
| 10 | 149.42 | 78.39 | 6.86 | 1801 | 2.7 | 924 | 267 | 3.14 | 46 | 87 | 108 | 12 | 65 | 98.6 |
| 11 | 148.55 | 66.52 | 8.04 | 1800 | 1.9 | 917 | 269 | 3.12 | 47 | 88 | 109 | 12 | 71 | 98.6 |
| 12 | 147.84 | 57.09 | 9.32 | 1803 | 1.5 | 919 | 271 | 3.10 | 47 | 87 | 108 | 12 | 71 | 98.6 |
| 13 | 145.84 | 47.71 | 11.00 | 1801 | 1.2 | 926 | 273 | 3.07 | 47 | 89 | 110 | 12 | 71 | 98.6 |
| 14 | 139.11 | 33.87 | 14.79 | 1800 | 0.8 | 927 | 287 | 2.93 | 47 | 91 | 110 | 12 | 71 | 98.6 |

**4.3 Measurement of External Noise Level – John Deere 8230T**

| | |
|---|---|
| -- Date of Test | September 28, 2006 |
| -- Location of Test | Nebraska Tractor Test Laboratory |
| -- Sound Level Meter | Bruel and Kjaer 2236 |
| -- Type of Track | Concrete Oval |
| -- Gear Number | 16 |
| -- Speed Prior to Acceleration | 23.9 km/h |
| -- Noise Level | 86.8 dB(A) |

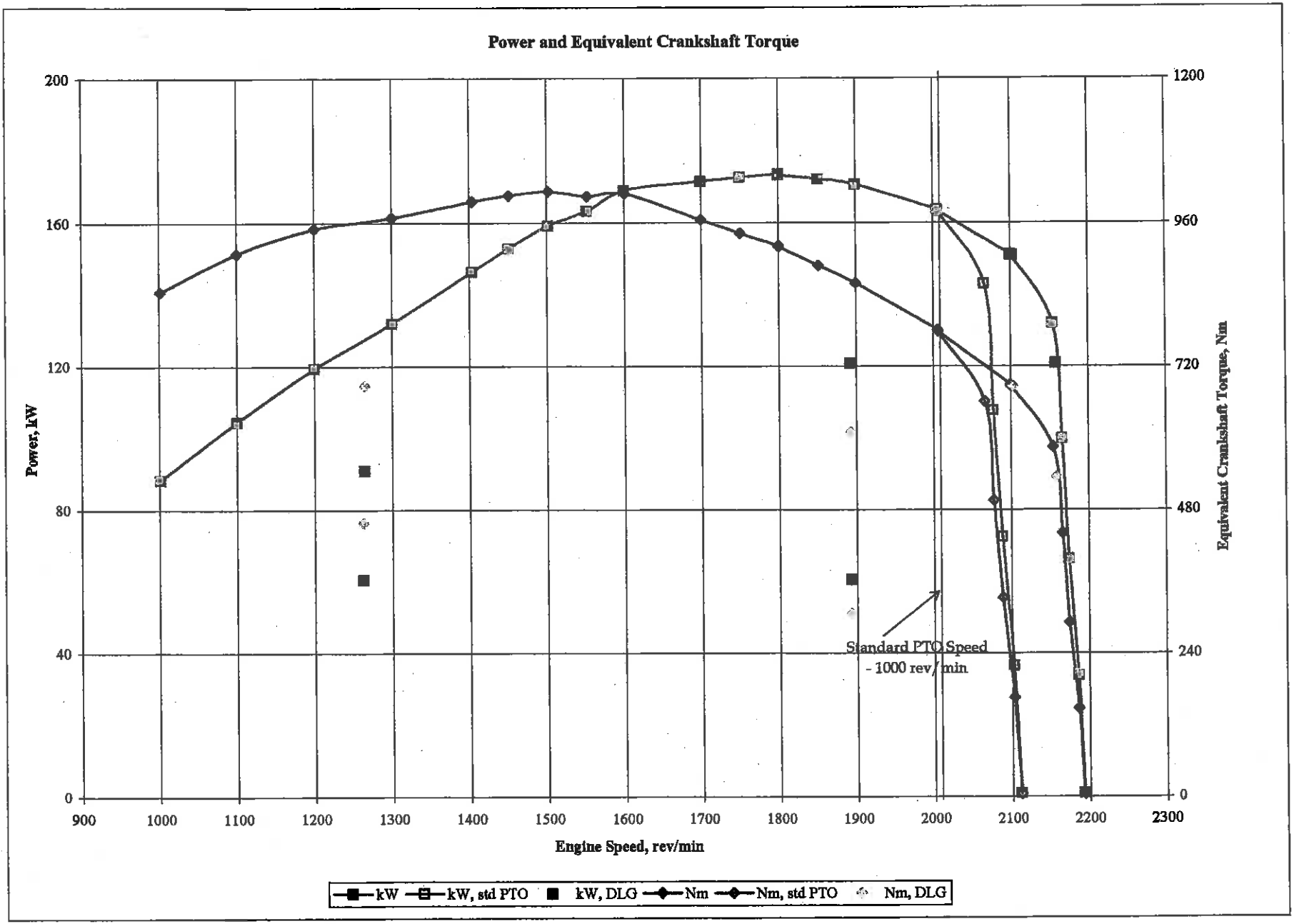
**4.4 Measurement of Noise Level at Operator's Ear***

| | |
|---|---|
| -- Date of Test | September 28, 2006 |
| -- Location of Test | Nebraska Tractor Test Laboratory |
| -- Sound Level Meter | Bruel and Kjaer 2236 |
| -- Type of Track | Concrete Oval |
| -- Gear Number | 9 |
| -- Drawbar Load | None |
| -- Noise at Operator Ear | 72.6 dB(A) |

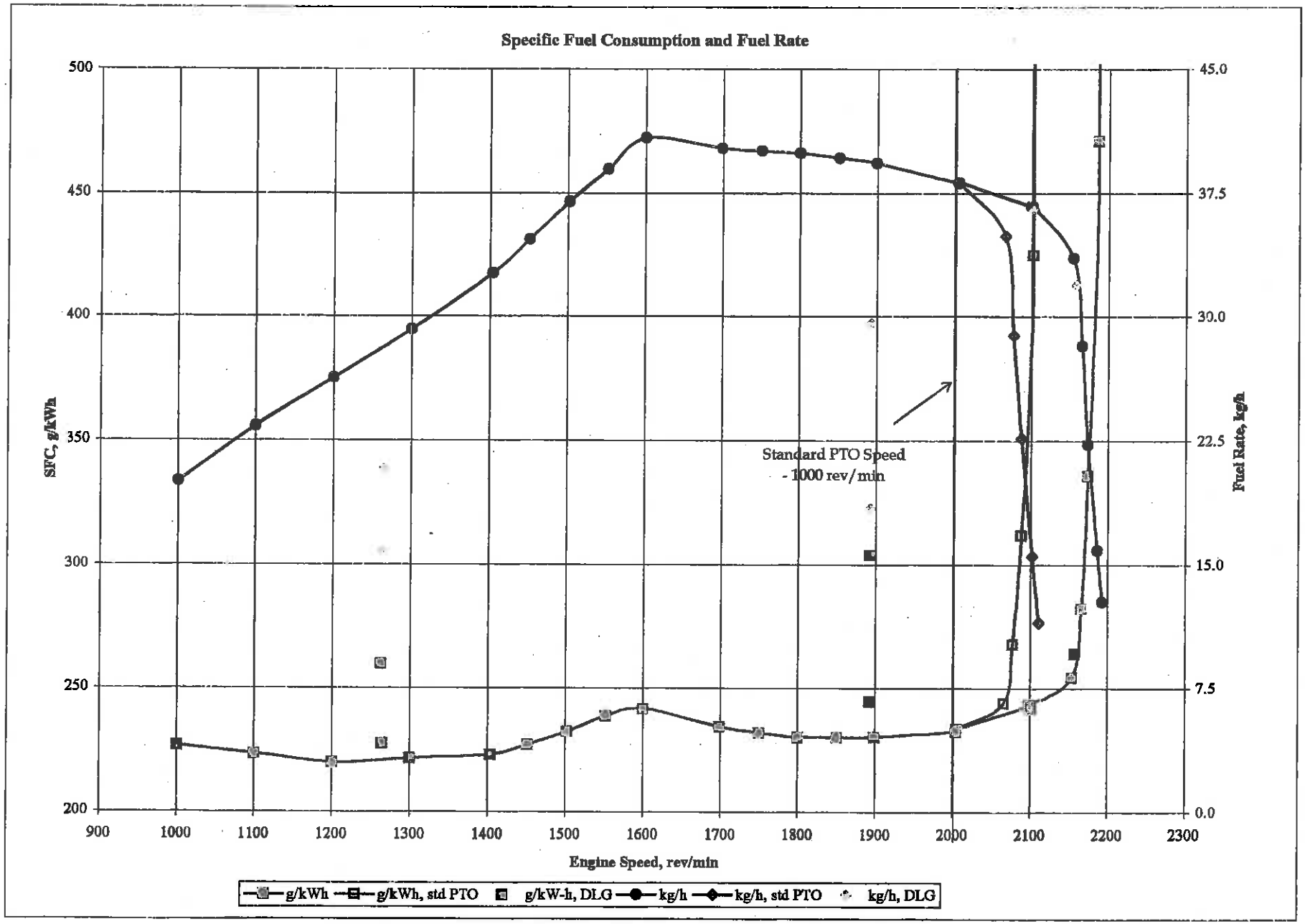
* Note: Nebraska tractor test station guidelines. Not covered by OECD approval

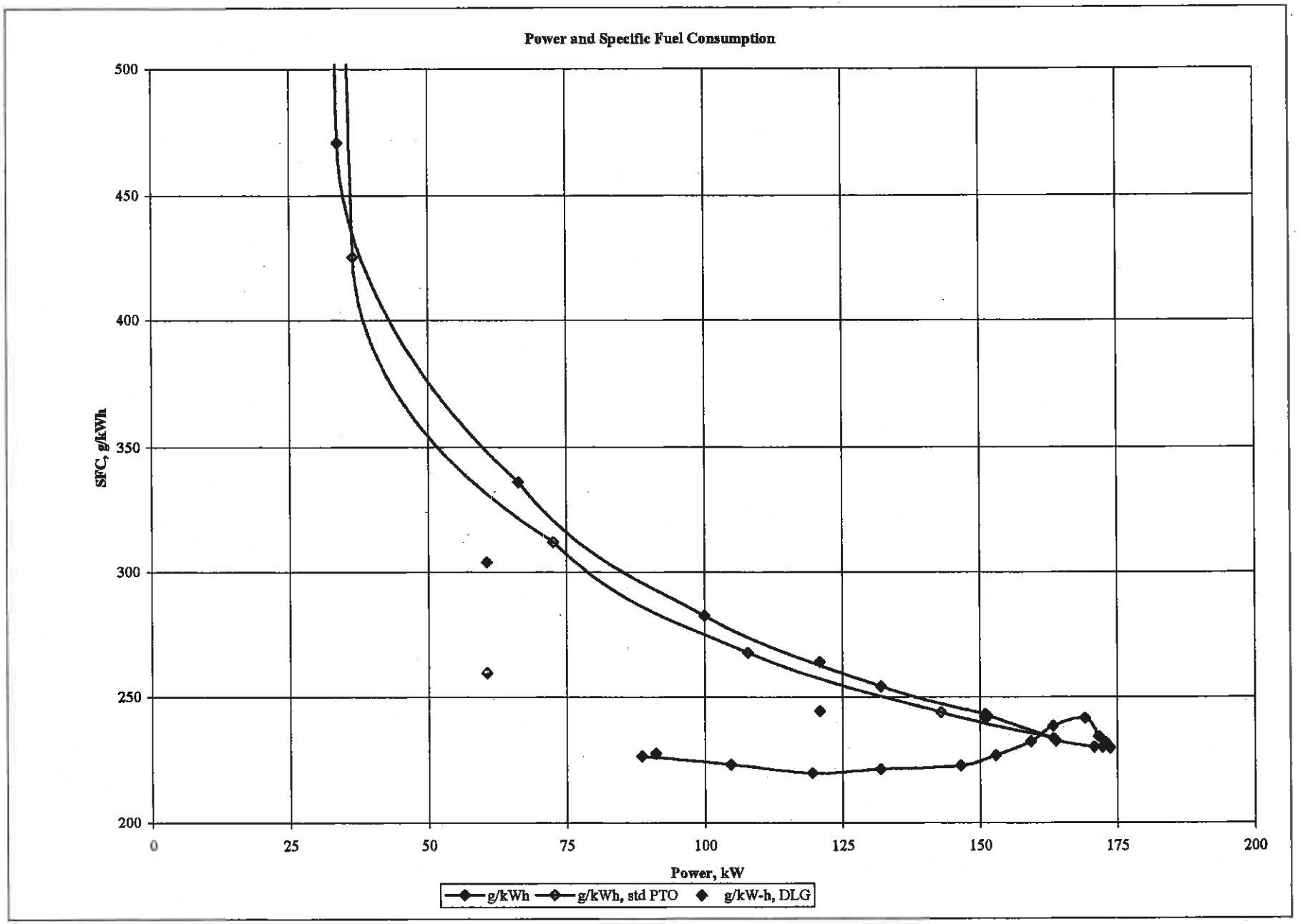
**5. Repairs and Adjustments:** None

**6. Remarks:** None


Power and Equivalent Crankshaft Torque
Power, kW
Equivalent Crankshaft Torque, Nm
Engine Speed, rev/min
200
160
120
80
40
0
1200
960
720
480
240
0
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
Standard PTO Speed
- 1000 rev/min
kW
kW, std PTO
kW, DLG
Nm
Nm, std PTO
Nm, DLG

**John Deere 8230T**




Power and Specific Fuel Consumption
SFC, g/kWh
500
450
400
350
300
250
200
0
25
50
75
100
125
150
175
200
Power, kW
g/kWh
g/kWh, std PTO
g/kW-h, DLG