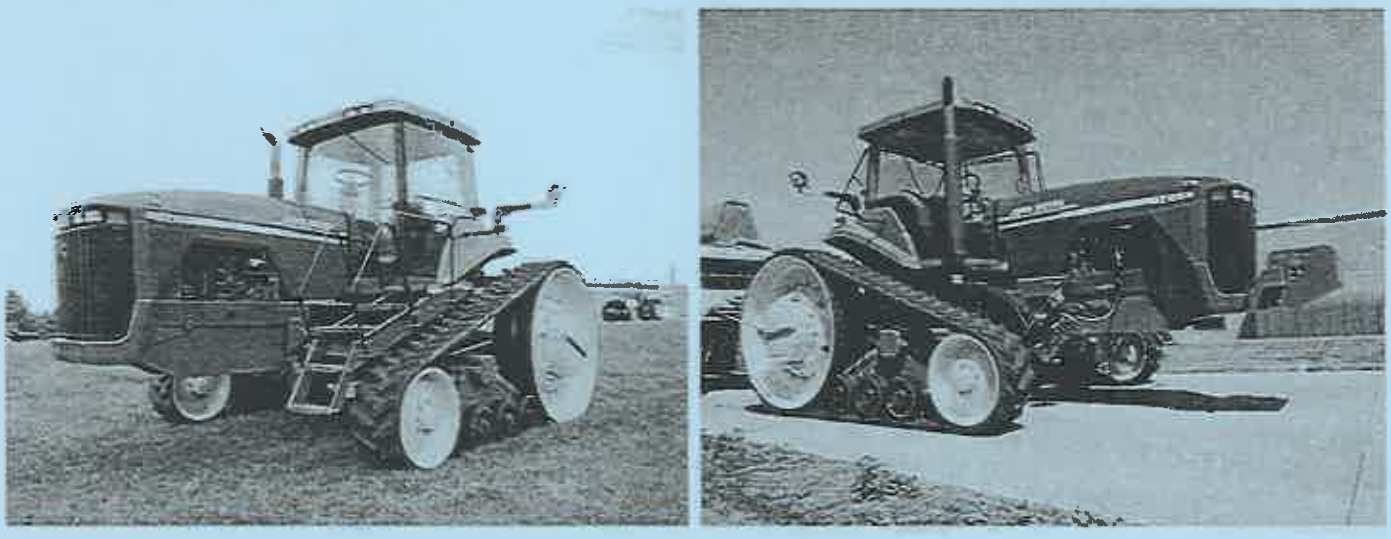
**OECD APPROVAL NO. 2/1934**
**CODE 2**
**DATE OF APPROVAL: 3 November 2000**

**NEBRASKA TRACTOR TEST LABORATORY**
**DEPARTMENT OF BIOLOGICAL SYSTEMS ENGINEERING**
**INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES**
**UNIVERSITY OF NEBRASKA - EAST CAMPUS**
**LINCOLN, NEBRASKA 68583-0832, USA**

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



## JOHN DEERE 8210T POWERSHIFT
**Rubber Tracked - 30 km/h Version**

| | |
|---|---|
| **MANUFACTURED BY:** | **John Deere Tractor Works**<br>**3500 East Donald Street, P.O. Box 270**<br>**Waterloo, Iowa 50704-0270** |
| **NEBRASKA TEST NO.** | **1774** |
| **TEST DATES:** | **April 24-May 17, 2000** |

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 3 November 2000 for the John Deere 8210T Powershift, Rubber Tracked - 30 km/h version, 16-speed transmission with OECD Number 2/1934.**

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 1 2000

## TABLE OF CONTENTS


Page

1. **SPECIFICATIONS** ..... 1

2. **TEST CONDITIONS** ..... 14

3. **COMPULSORY TESTS**
   - **3.1** Main Power Take-Off Performance ..... 17
   - **3.2** Hydraulic Power and Lifting Forces ..... 18
   - **3.3** Drawbar Performance ..... 20

4. **OPTIONAL TESTS**
   - **4.1** Drawbar Power (Ballasted - 2200 rev/min) ..... 21
   - **4.2** Drawbar Power (Ballasted - 2000 rev/min) ..... 22
   - **4.3** Hydraulic Power (Standard Pump) (one outlet) ..... 23
   - **4.4** Hydraulic Power (High Flow Pump) (one outlet) ..... 24
   - **4.5** Hydraulic Power (High Flow Pump) (two outlets) ..... 25
   - **4.6** Power Lift Test - North American Linkage ..... 26
   - **4.7** Sound Test OECD Code 5 (Annex 1 and 2) ..... 27
   - **4.8** Measurement of External Noise Level ..... 28

5. **REPAIRS** ..... 29

6. **REMARKS** ..... 29

7. **PTO PERFORMANCE CURVES** ..... 30

| | |
|---|---|
| - Manufacturers Name/Address | John Deere Tractor Works<br>3500 East Donald St.<br>P.O. Box 270<br>Waterloo, Iowa 50704-0270 |
| - Location of tractor assembly | Same |
| - Submitted for test by | The Manufacturer |
| - Selected for test by | The Manufacturer in agreement with the Nebraska Tractor Test Laboratory |
| - Place of running in | John Deere Product Engineering Center, Waterloo, Iowa |
| - Duration of running in | 92 hr |
| - Location of test | Nebraska Tractor Test Laboratory, Lincoln, Nebraska U.S.A. |

## 1. SPECIFICATIONS OF TRACTOR

### 1.1 IDENTIFICATION

| | |
|---|---|
| - Make | John Deere |
| - Model | 8210T Powershift |
| - Type | Unit Construction, rubber tracklaying tractor, Powershift, 30 km/h |
| - Number of driving wheels | 2 tracks (rubber belts) |
| - Serial Number | *RW8210T901069* |
| - 1st Serial number | Confidential |

### 1.2 ENGINE

| | |
|---|---|
| - Make | John Deere |
| - Model | 6081HWR14 |
| - Type | 4-stroke Diesel; turbocharged, air-to-air aftercooled, direct injection |
| - Serial Number | *RG6081H098352* |

#### 1.2.1 Cylinders

| | |
|---|---|
| - Number and Disposition | 6, in-line, vertical |
| - Bore x Stroke | 115.8 mm x 128.5 mm |
| - Cubic Capacity | 8134 $cm^3$ |
| - Compression Ratio | 16.5:1 |
| - Arrangement of Valves | Overhead |
| - Cylinder Liner (wet or dry) | Wet; replaceable |

#### 1.2.2 Supercharging

| | |
|---|---|
| - Make | Schwitzer |
| - Model | RE64765 |
| - Type | Exhaust gas driven |
| - Pressure | 0.126 ± 0.015 MPa (at rated engine speed and full load) |

### 1.2.3 Fuel System

| | |
|---|---|
| - Fuel Feed System | Transfer pump integral with injection pump |
| - Make/Model/Type of Filter(s) | |
| primary | Stanadyne/AR103220/Fuel Strainer |
| secondary | Stanadyne/AR86745/Paper element |
| - Fuel Tank Capacity | 492 $dm^3$ |
| - Fuel Cooler | Heat exchanger with air in fuel return line |
| - Make/Model/Type of Injection Pump | Bosch/RE501859/In-line; electric shut off |
| - Injection Pump Serial Number | 9702500043 |
| - Production setting of injection Pump | |
| · Flow Rate | 41.1 ± 2.0 $dm^3/h$ (at rated engine speed and full load) |
| · Fuel Density | 0.847 $g/cm^3$ |
| - Make/Model/Type of Injectors | Bosch/RE61593/P-type nozzle |
| - Injection Pressure | 29.0 +1.2/-0.0 MPa |
| - Timing | 18° ± 1° BTDC |

### 1.2.4 Governor

| | |
|---|---|
| - Make/Model/Type | John Deere Focus/Electronic Control |
| - Governed engine speed range | 800 - 2400 rev/min |
| - Rated engine speed | 2200 rev/min |
| - High idle speed range | 2300 ± 25 rev/min |

### 1.2.5 Air Cleaner

| | |
|---|---|
| - Pre-cleaner | |
| · Make/Model/Type | Donaldson/RE164286/Strato-tube pre-cleaner with aspirator |
| · Air intake location | Under hood, front of tractor |
| - Main Cleaner | |
| · Make/Model/Type | Donaldson/RE51629/pleated paper |
| · Location | Under hood, engine compartment |
| - Secondary element | |
| · Make/Model/Type | Donaldson/RE51630/pleated paper |
| - Maintenance Indicator | Dash mounted warning light and audible signal |

### 1.2.6 Lubrication System

| | |
|---|---|
| - Type of Feed pump | Full pressure; positive displacement |
| - Type of filter(s) | Full flow |
| - Number of filters: | One; spin-on |
| - Oil Cooler | Heat exchanger with engine coolant |

### 1.2.7 Cooling System

| | |
|---|---|
| - Type of coolant: | Liquid |
| - Type of pump | Centrifugal, gear driven |
| - Fan specification | Belt driven; suction type; variable speed |
| - Number of Fan Blades | 8 |
| - Fan Diameter | 711 mm |
| - Coolant system capacity | 34 $dm^3$ |
| - Type of temperature control | Two thermostats and variable speed fan |
| - System pressure | 69 ± 5 kPa |

### 1.2.8 Starting System

| | |
|---|---|
| - Make/Model/Type of starter | Nippondenso/RE69704/Solenoid engaged |
| - Power rating | 4.0 kW |
| - Cold starting aid | Ether spray in intake manifold |
| - Safety device | Electrical lockout on gearshift lever |

### 1.2.9 Electrical System

| | |
|---|---|
| - Voltage and grounding | 12 Volt DC; negative ground |
| - Alternator | |
| · Make/Model/Type | Nippondenso/RE46608/Belt driven |
| · Power rating | 1.9 kW |
| - Batteries | |
| · Number and connection | Two; 12 Volt batteries in parallel; SAE tapered post |
| · Rating | 925 Cold Cranking Amps/battery 175 Ah/battery at 20 hour rating |

### 1.2.10 Exhaust System

| | |
|---|---|
| - Muffler Make/Model/Type | Nelson/RE44716/Expansion Chamber |
| - Location | Vertical muffler |
| - Exhaust stack location | Vertical; right front corner of cab |

## 1.3 TRANSMISSION

### 1.3.1 Clutch (travel alone)

| | |
|---|---|
| - Make/Model/Type | John Deere/Multiple plate/Oil cooled |
| - Number of plates | 7 |
| - Plate diameter | 232 mm |
| - Method of operation | Hydraulic; pedal actuated |

### 1.3.2 Gear Box

- Make/Model/Type: John Deere/Full Powershift/mechanical
- Arrangement: Countershaft design consisting of 8 multidisc hydraulically cooled clutches and 1 multidisc hydraulically cooled planetary brake

| | Forward | Reverse |
|---|---|---|
| Number of gears | 16 | 4 |
| Number of ranges/groups | 1 | 1 |
| Total of arrangements | 16 | 4 |

- Oil cooler: Heat exchanger with air
- Available options: 16 x 5 (specialty market)

### 1.3.3 Rear axle and final drives

- Make/Model/Type: John Deere/spiral bevel gear and pinion, outboard planetary final drives with electronically controlled hydrostatic differential steering
- Differential lock: Not applicable

### 1.3.4 Front axle and final drives

Not applicable

### 1.3.5 Total ratios and traveling speeds

*Creeper gear ratios and travel speeds (not supplied with test tractor)*

| Gear Number | Number of engine revolutions for one revolution of the driving wheels | Nominal travel speed (*) at rated engine speed of 2200 rev/min (km/h) |
|---|---|---|
| Forward | | |
| 1 | 346.0220 | 1.87 |
| 2 | 270.8786 | 2.39 |
| 3 | 212.8132 | 3.04 |
| 4 | 166.5978 | 3.88 |
| 5 | 137.5825 | 4.70 |
| 6 | 121.9316 | 5.31 |
| 7 | 107.7045 | 6.01 |
| 8 | 95.4524 | 6.78 |
| 9 | 84.6171 | 7.65 |
| 10 | 74.9913 | 8.63 |
| 11 | 66.2413 | 9.77 |
| 12 | 58.7059 | 11.02 |
| 13 | 46.1282 | 14.02 |
| 14 | 36.1109 | 17.91 |
| 15 | 28.3701 | 22.80 |
| 16 | 22.2092 | 29.13 |
| Reverse | | |
| 1 | -396.6818 | -1.63 |
| 2 | -157.7254 | -4.10 |
| 3 (**) | -139.7831 | -4.63 |
| 4 (***) | -52.8817 | -8.90 |
| 5 (****) | -52.8817 | -12.23 |

(*) Calculated with a rear track dynamic radius index of 780 mm
(**) Engine speed is adjustable to 2400 RPM in the Reverse Gear Number 3
(***) Engine speed is limited to 1600 RPM in the Reverse Gear Number 4
(****) Available in Specialty Markets only

## 1.4 POWER-TAKE-OFF

### 1.4.1 Main Power-Take-Off

| | |
|---|---|
| - Type | Independent |
| - Method of engagement | Electro-hydraulically actuated multi-plate wet clutch operated by single hand control switch |
| - Number of shafts | 1, Single Speed |
| - Method of changing speeds | None |

#### 1.4.1.1 Standard Single Speed PTO-1000 rev/min

| | |
|---|---|
| - Location | Rear of tractor; center plane |
| - Diameter of PTO shaft end | 44.5 mm |
| - Number of splines, in conformity with ISO 500/1991 | 20; conforms to ISO 500/1991 |
| - Height above ground | 772.4 mm |
| - Distance from median plane of tractor | 0 mm |
| - Distance behind rear axle | 583.6 mm |
| - PTO speed at rated engine speed (2200 rev/min) | 1009 rev/min |
| - Engine speed at Standard PTO speed | 2179 rev/min |
| - Ratio of Engine rev/min to PTO rev/min | 2.179 : 1 |
| - Power restriction | None |
| - Direction of rotation (viewed facing driving end) | Clockwise |

#### 1.4.1.2 Power-Take-Off Proportional to Ground Speed

Not available

## 1.5 POWER LIFT

| | |
|---|---|
| - Make/Model/Type | John Deere/Electro-hydraulic lower link sensing; variable mix of draft and position control(option slip control); adjustable rate of drop |
| - Type of hydraulic system | Closed center; pressure and flow compensated |
| - Number/Type of cylinders | Two external/Single acting, 2-100 mm diameter |
| - Type of linkage lock for transport | Electro-hydraulic (with locking notch for hand lever control) |
| - Relief valve pressure setting | 20.3 ± 0.3 Mpa (pump stall pressure) |
| - Opening pressure of cylinder safety valve | 23.25 ± 0.5 MPa |
| - Lift Pump type | Axial piston, variable pressure and flow, pressure and flow compensated, (45cc & optional 57 cc displacement) |
| - Transmission between pump and engine | Direct spur gear drive |
| - Type/Number of filters | Synthetic media, screw-on canister/one |
| - Location of oil reservoir | Differential case housing |
| - Type/Number/Location of tapping points | ISO standard breakaway couplers/3 standard with 4th, 5th and additional inlet/outlet pair for externally controlled implements/rear of tractor |
| - Maximum oil volume available for external cylinders | 20 $dm^3$; additional 10 $dm^3$ allowable overfill for total of 30 $dm^3$. |

## 1.6 Three point linkage

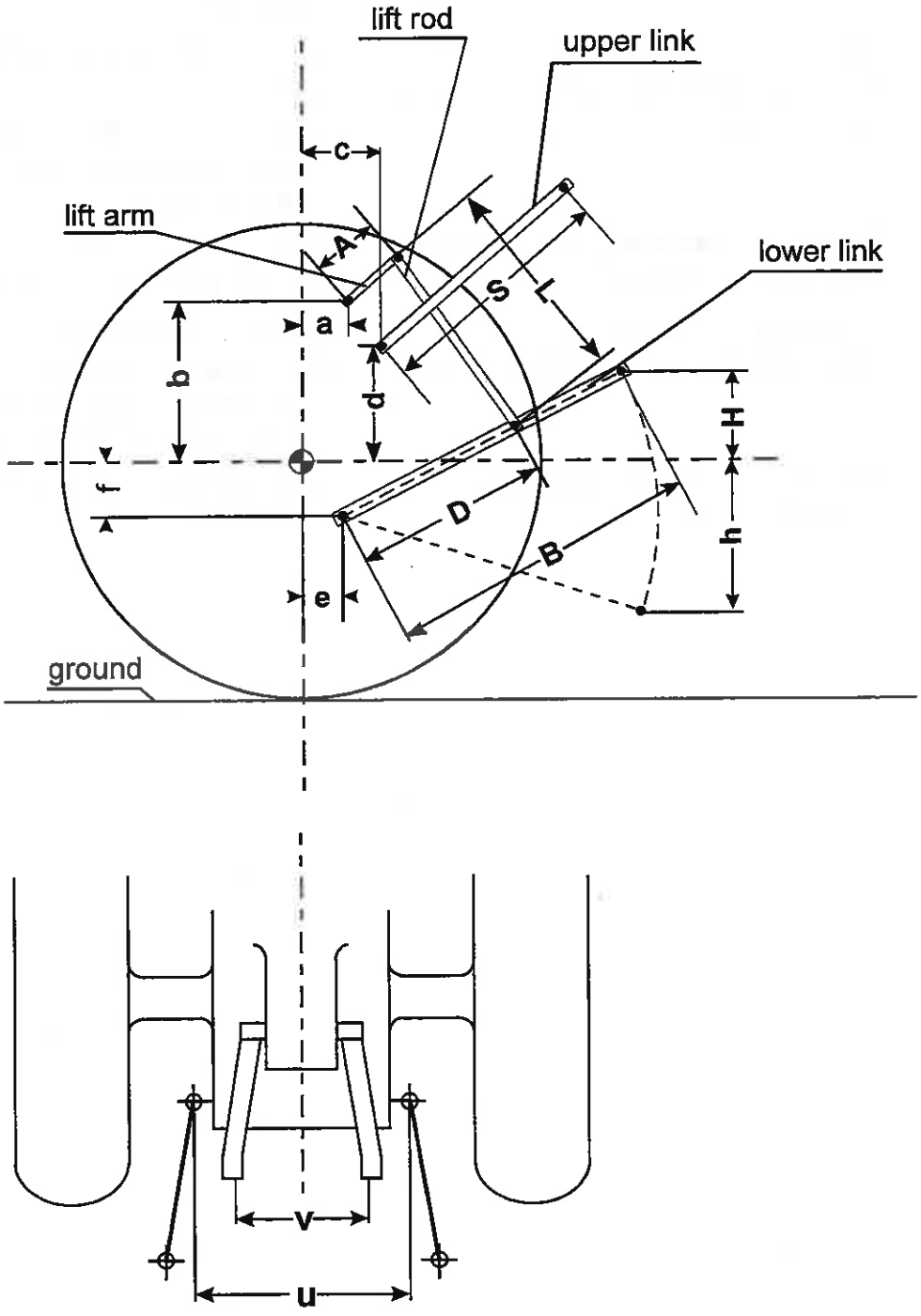


Table 1.6.1 - Linkage Geometry Dimensions - SM version

- Category 3 in conformity with ISO 730-1:1994 and ISO 730-2:1979
- Category Adapter Convertible to Category - None

| Category adapter: Walterscheid lower links | | Dimension or range (mm) | Setting used on test (mm) |
|---|---|---|---|
| Lift category | | III | III |
| Length of lift arms | (A) | 495 | same |
| Length of lower links | (B) | 1065 | same |
| Distance of lift arm pivot point from rear-wheel axis: horizontally<br>vertically | (a)<br>(b) | -140<br>565 | same<br>same |
| Horizontal distance between the two lower link points | (U) | 600 | same |
| Horizontal distance between the two lift arm ends points | (V) | 750 | same |
| Length of upper link | (S) | 729 to 900 | 822 |
| Distance of upper link pivot point from rear-wheel axis: horizontally<br>vertically | (c)<br>(d) | 395, 395, 424<br>192.5, 259.5, 321.1 | 424<br>321 |
| Distance of lower link pivot point from rear-wheel axis: horizontally<br>vertically | (e)<br>(f) | 175<br>280 | same<br>same |
| Distance of lower link pivot points to lift rod pivot points on lower links | (D) | 720 | same |
| Length of lift rods | (L) | 968 to 1072 | 1072 |
| Height of lower hitch points relative to rear wheel axis: In low position<br>In high position | (h)<br>(H) | 500 to 650<br>206 to 339 | 650<br>206 |
| Height above ground of lower hitch points when locked in transport position | | 1059 to 1191 | 1059 |

Rear track static radius index of 852.55 mm

Table 1.6.2 - Linkage Geometry Dimensions - North American version

- Category 3 in conformity with ISO 730-1:1994 and ISO 730-2:1979
- Category Adapter Convertible to Category - None

| Category adapter: Quick Attach linkage | | Dimension or range (mm) | Setting used on test (mm) |
|---|---|---|---|
| Lift category | | III | III |
| Length of lift arms | (A) | 495 | same |
| Length of lower links | (B) | 1065 | same |
| Distance of lift arm pivot point from rear-wheel axis: | | | |
| horizontally | (a) | -140 | same |
| vertically | (b) | 565 | same |
| Horizontal distance between the two lower link points | (U) | 600 | same |
| Horizontal distance between the two lift arm ends points | (V) | 750 | same |
| Length of upper link | (S) | 694 to 865 | 733 |
| Distance of upper link pivot point from rear-wheel axis: | | | |
| horizontally | (c) | 395 | same |
| vertically | (d) | 192.5, 259.5 | 259.5 |
| Distance of lower link pivot point from rear-wheel axis: | | | |
| horizontally | (e) | 175 | same |
| vertically | (f) | 280 | same |
| Distance of lower link pivot points to lift rod pivot points on lower links | (D) | 720 | same |
| Length of lift rods | (L) | 968 to 1089 | 1089 |
| Height of lower hitch points relative to rear wheel axis: | | | |
| In low position | (h) | 482 to 650 | 650 |
| In high position | (H) | 140 to 299 | 140 |
| Height above ground of lower hitch points when locked in transport position | | 993 to 1161 | 993 |

Rear track static radius index of 852.55 mm

## 1.7 SWINGING DRAWBAR

| | NA Option<br>Tested Version | SM Option<br>Not Tested |
|---|---|---|
| - Type | Oscillating | same |
| - Height above ground<br>· Maximum (offset flipped up)<br>· Minimum (offset flipped down) | <br>565.4 mm<br>467.4 mm | <br>same<br>same |
| - Type of adjustment | Invert drawbar and reposition clevis | same |
| - Distance of hitch point from rear wheel axis, horizontally | 1040.7, 1091.5 mm | 1090, 1178 mm |
| - Distance of hitch point from PTO shaft end | | |
| · Vertically<br>· Horizontally (shaft diameter) | 305, 207 mm<br>457, 508 mm | same<br>506, 595 mm |
| - Lateral adjustment: | | |
| · Right side<br>· Left side | 203.75, 211.4 mm<br>203.75, 211.4 mm | 212, 225.5 mm<br>212, 225.5 mm |
| - Distance of pivot point from rear wheel axis, horizontally | 290.5 mm (forward) | same |
| - Diameter of drawbar pin hole | 40 mm | 33 mm |
| - Maximum vertical static permissible load: | | |
| · Short position<br>· Extended position | 17.35 kN<br>17.35 kN | 23.58 kN<br>16.24 kN |

## 1.8 TRAILER HITCH

Not available

## 1.9 HOLED DRAWBAR

Not available

## 1.10 STEERING

- Make/Model/Type: John Deere Hydrostatic Differential Steering/Pump and motor/Electro-Hydraulic Differential steering controlled by steering wheel
- Method of operation: Steering wheel angle determines difference in speed between the 2 rubber track drive wheels
- Pump(s): Axial Piston Variable Displacement Pump and Axial Piston Fixed Displacement Motor
- Ram(s): None
- Working pressure: Up to 45.0 MPa +0.5/+2.5 MPa
- Filter Make/Model/Type: Donaldson/RE69054/paper element

## 1.11 BRAKE SYSTEM

### 1.11.1 Service Brakes

- Make/Model/Type: Vickers-John Deere/ Load sensing power with manual backup
- Method of operation: Hydraulically actuated oil immersed disc operated by one pedal
- Trailer Brake type: Not available

### 1.11.2 Parking Brake

- Type: Spring applied, hydraulically released multi-disc
- Method of operation: Gear selector lever

## 1.12 WHEELS

- Number
  - · Front: None
  - · Rear: Two; Driving and steering
- Wheelbase: Not applicable
- Track width adjustment

| | Minimum mm | Maximum mm | Adjustment method |
|---|---|---|---|
| Rear | 2235* | 3035 | 8 positions available by adjusting track frame and rear wheel:<br>2235, 2435, 2485*, 2535, 2635, 2735, 2835, and 3035 |

* Requires exchange of right and left track frames

## 1.13 PROTECTIVE STRUCTURE

- Make/Model/Type: John Deere/SG-058/ Cab
- Seat and steering wheel reversible: No
- Manufactures Name/Address: John Deere Waterloo Works<br>Waterloo, Iowa, USA
- Protective device
  - · Cab/frame/rollguard/other: Cab
  - · Tiltable/not tiltable: Not Tiltable
- OECD Approval Number: 4/0 547<br>(Certified to SAE-J2194 and CSA-B352.0, including OSHA #1928.51)
- Date of Approval: 2 September 1998
- Nos. of Minor Modification Certificates, if any: MOD 1: 1<br>24 August 1999

### 1.14.1 DRIVER'S SEAT

| | |
|---|---|
| - Make/Model/Type | Sears Mfg/RE68579 (SM: RE152546)/Air cushion suspension (Comfort Command™) |
| - Type of suspension | Air |
| - Type of damping | Adjustable, viscous damping |
| - Range of adjustment | |
| · Longitudinal | 178 mm |
| · Vertical | 172 travel, 106 adjustable range |
| · Right Rotation | 20° |
| · Left Rotation | 15° |
| - Safety Belt | Yes |

### 1.14.2 OPTIONAL DRIVER'S SEAT

Not available

### 1.14.3 PASSENGER SEAT

Not available

## 1.15 LIGHTING

| | Height above ground of center (mm) | Size (mm) | Distance from outside edge to median plane of tractor (mm) |
|---|---|---|---|
| Headlights | | | |
| Hood inner | 1800 | 70 x 127 | 200 |
| outer | 1800 | 71 x 127 | 335 |
| Roof inner | 3040 | 51 x 127 | 350 |
| outer | 3040 | 51 x 127 | 500 |
| Upper mid body | 2150 | 70 x 127 | 725 |
| Lower mid body | | | |
| left | 1380 | 70 x 127 | 1400 |
| right | 1300 | 70 x 127 | 1010 |
| Rearlights | | | |
| roof | 3050 | 70 x 127 | 640 |
| fender | 2100 | 70 x 127 | 890 |
| Tail lights | 1920 | 89 x 210 | 870 |
| Hazard lights | | | |
| roof front | 3040 | 82 x 240 (*) | 770 |
| roof rear | 3050 | 82 x 240 (*) | 790 |
| Extremity Lights | | | |
| Wide | 2195 | 106.7 dia. | 1900 |

(*) Wrap-around lights

## 2. TEST CONDITIONS

### 2.1 OVERALL DIMENSIONS

| | | Width | | Height at Top of | |
|---|---|---|---|---|---|
| | Length | Minimum | Maximum | Protective Structure | Exhaust Pipe |
| | mm | mm | mm | mm | mm |
| Unballasted | 5487 | 3404 | 3454 | 3135 | 3245 |
| Ballasted | 6012 | 3404 | 3454 | 3135 | 3245 |

### 2.2 GROUND CLEARANCE

360 mm

Clearance-limiting part: Drawbar rear support (Rear hitch frame)

### 2.3 TRACTOR MASS

With cab, full fuel tank

| | Unballasted | | Ballasted | |
|---|---|---|---|---|
| | Without driver (kg) | With driver (kg) | Without driver (kg) | With driver (kg) |
| Total | 11521 | 11596 | 12449 | 12524 |

Note: Maximum tractor dry weight must be less than 31500 lb (14288 kg)

Ballast Added

| | Number of weights | Total mass (kg) | Liquid (kg) |
|---|---|---|---|
| Front Weight Support | 1 | 130 | 0 |
| Front Weights | 18 | 798 | 0 |

Note: Maximum front tractor weight must be less than 2200 lb (998 kg), or 20 weights w/ support.

## 2.4 TRACK SPECIFICATIONS

| | |
|---|---|
| Make | Goodyear (Trackman™) |
| Track Materials | Rubber with steel reinforcement |
| Track width and base | 406.4 mm and 2261 mm |
| Dynamic rolling radius under drive wheel | 780 mm |
| Static distance of rear axle to ground | 852.55 mm |
| Track support system | Oscillating front idler & three mid-rollers supported by midframe and rear wheel attached to drive axle |
| Treadbars | |
| Total per track | 54 |
| Number per meter | 6.56 per meter |
| Bar length at top | 191 mm |
| Bar width at top | 40 mm |
| Bar width at center | 53 mm |
| Bar height | 50.8 mm |
| Track length | 8230 mm |
| Track ground contact length | 2261 mm |

## 2.5 TRACK SPECIFICATIONS

Track Width 2845 mm

## 2.6 FUEL

- Type/grade: Grade 2-D, in conformity with the national standard
- Density at 15 °C:
  - (PTO tests): 0.847 g/cm$^3$
  - (Drawbar tests): same as PTO tests

## 2.7 OILS AND LUBRICATION

### 2.7.1 Capacity and Change Interval

| | Capacity | Oil Change | Filter(s) Change |
|---|---|---|---|
| | $dm^3$ | hours | hours |
| Engine (with filter) | 23.5 | 250 (375 with John Deere PLUS-50™ oil and John Deere filter) | Same as Oil Change |
| Transmission, rear axle, Hydraulics and Steering | 246 | 1500 | As required or 750 |
| Wheel Hubs | 50 | 1500 | No filter |

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

| | Recommended | Used during test |
|---|---|---|
| Engine oil: | | |
| Type | John Deere, Torq-Gard Supreme Plus 50; SAE 15W-40 or 10W-40 | John Deere; Torq-Gard Supreme, PLUS-50; SAE 15W-40 |
| Viscosity | 12.8 cSt at 100° C | |
| Classification | API CF-4; ACEA E-2 | |
| Transmission oils | | |
| Type | John Deere, HY-GARD (J20C); SAE 10W-30 | Same |
| Viscosity | 58 cSt at 40° C | |
| Classification | JDM J20C | |
| Hydraulic Fluid | | |
| Type | Same as transmission | Same |
| Viscosity | | |
| Classification | | |
| Steering oil | | |
| Type | Same as transmission | Same |
| Viscosity | | |
| Classification | | |
| Grease | John Deere Moly High Temperature EP Grease | Same |

### 2.7.3 Grease

- Number of lubrication points: 17

## 3. COMPULSORY TESTS RESULTS

### 3.1 Main power take-off

- Date and location of tests: 24-Apr-00 Nebraska Tractor Test Laboratory, Lincoln, NE, USA
- Type of dynamometer bench: Eaton

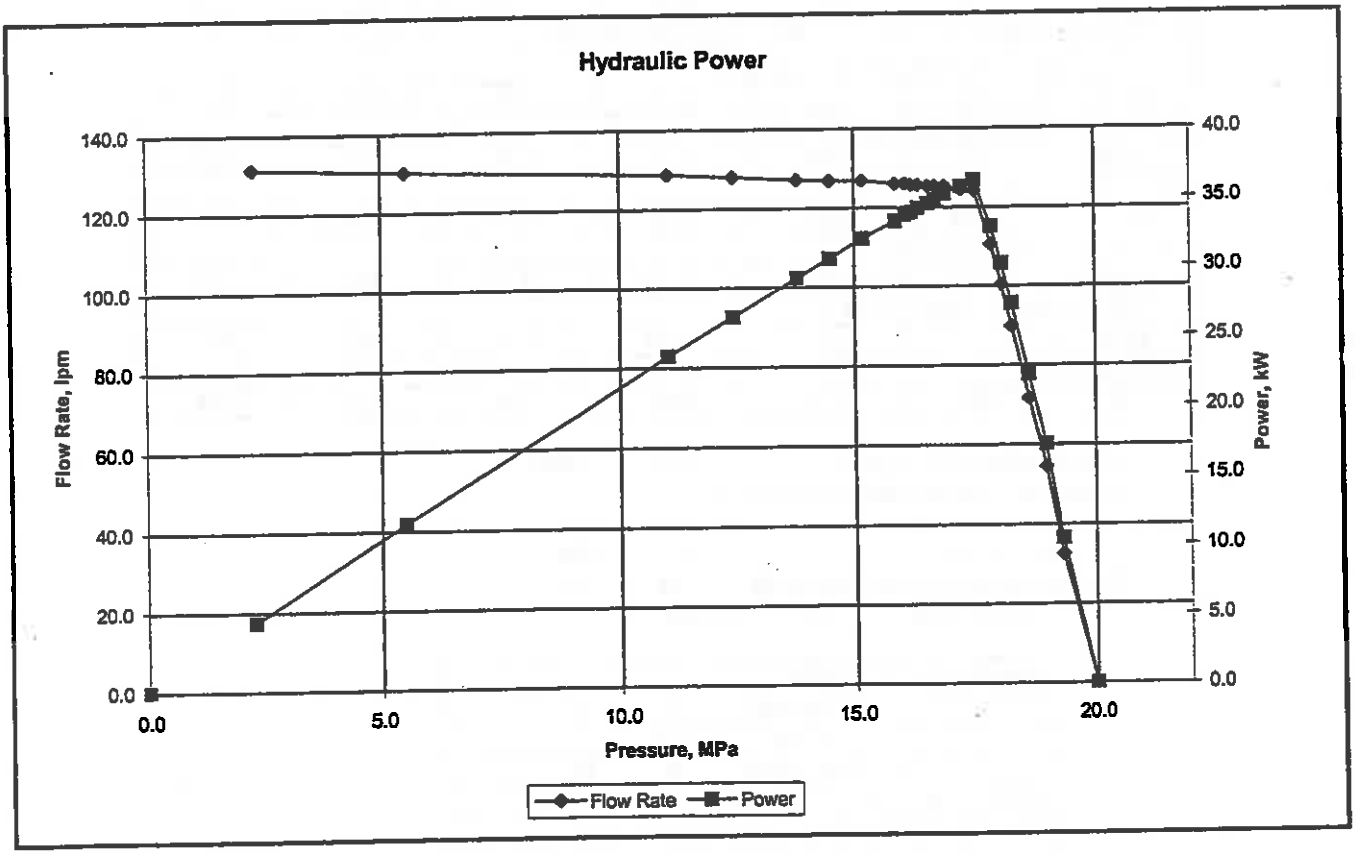
| | Speed | | Fuel consumption | | | Specific |
|---|---|---|---|---|---|---|
| Power | Engine | PTO | Hourly | | Specific | energy |
| kW | rev/min | | kg/h | l/h | g/kWh | kW-h/l |
| 3.1 MAXIMUM POWER - TWO HOUR TEST | | | | | | |
| 161.31 | 2000 | 917 | 37.39 | 44.16 | 232 | 3.65 |
| 3.1.2 POWER AT RATED ENGINE SPEED | | | | | | |
| 140.29 | 2200 | 1009 | 35.10 | 41.45 | 250 | 3.38 |
| 3.1.3 STANDARD POWER TAKE-OFF SPEED (1000 +/- 25 rev/min) | | | | | | |
| 140.29 | 2200 | 1009 | 35.10 | 41.45 | 250 | 3.38 |
| 3.1.4 PART LOADS | | | | | | |
| 3.1.4.1 the torque corresponding to maximum power at rated engine speed | | | | | | |
| 140.29 | 2200 | 1009 | 35.10 | 41.45 | 250 | 3.38 |
| 3.1.4.2 85% of torque obtained in 3.1.4.1 | | | | | | |
| 122.58 | 2253 | 1034 | 32.25 | 38.08 | 263 | 3.22 |
| 3.1.4.3 75% of torque defined in 3.1.4.2 | | | | | | |
| 92.11 | 2263 | 1038 | 26.54 | 31.34 | 288 | 2.94 |
| 3.1.4.4 50% of torque defined in 3.1.4.2 | | | | | | |
| 61.69 | 2271 | 1042 | 20.96 | 24.75 | 340 | 2.49 |
| 3.1.4.5 25% of torque defined in 3.1.4.2 | | | | | | |
| 30.92 | 2282 | 1047 | 14.83 | 17.52 | 480 | 1.77 |
| 3.1.4.6 unloaded | | | | | | |
| 1.86 | 2290 | 1050 | 9.66 | 11.41 | 5185 | 0.16 |
| 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 | | | | | | |
| 140.29 | 2200 | 1009 | 35.10 | 41.45 | 250 | 3.38 |
| 3.1.5.2 85% of torque obtained in 3.1.5.1 | | | | | | |
| 122.58 | 2253 | 1034 | 32.25 | 38.08 | 263 | 3.22 |
| 3.1.5.3 75% of torque defined in 3.1.5.2 | | | | | | |
| 92.11 | 2263 | 1038 | 26.54 | 31.34 | 288 | 2.94 |
| 3.1.5.4 50% of torque defined in 3.1.5.2 | | | | | | |
| 61.69 | 2271 | 1042 | 20.96 | 24.75 | 340 | 2.49 |
| 3.1.5.5 25% of torque defined in 3.1.5.2 | | | | | | |
| 30.92 | 2282 | 1047 | 14.83 | 17.52 | 480 | 1.77 |
| 3.1.5.6 unloaded | | | | | | |
| 1.86 | 2290 | 1050 | 9.66 | 11.41 | 5185 | 0.16 |

- No load maximum engine speed: 2290 rev/min
- Torque (equivalent crankshaft) at rated speed:
  - At rated engine speed 609 Nm
  - At 2-hour test 770 Nm
- Maximum torque (equivalent crankshaft): 898 Nm
  (engine speed: 1200 rev/min)

| Mean atmospheric conditions: | | |
|---|---|---|
| Dry bulb | 25 | °C |
| Pressure | 97.9 | kPa |
| Relative Humidity | 42 | % |
| Maximum temperatures: | | |
| Coolant | 103 | °C |
| Engine oil | 101 | °C |
| Fuel | 44 | °C |
| Engine air intake | 32 | °C |

## 3.2.1 Hydraulic Power Test- Standard pump, 2 outlets

| | | | |
|---|---|---|---|
| Date of Test: | 5-May-00 | | |
| Location of Test-City-State: | | Tractor Test Lab, Lincoln, NE, USA | |
| Tapping point used for test: | | Remote hydraulic outlets | |
| I. | Sustained pressure with pump stalled: | | |
| | 19.99 MPa | | |
| | *2900 psig* | | |
| II. | Pump delivery rate at minimum pressure at rated engine speed: | | |
| | 131.4 l/min | | |
| | *34.7 gpm* | | |
| III. | Flow rate, pressure, power: | | |
| | 90% of relief valve setting | | |
| | 100.3 l/min | 18.06 MPa | 30.2 kW |
| | *26.5 gpm* | *2620 psig* | *40.5 hp* |
| | Maximum hydraulic power: | | |
| | 124.2 l/min | 17.51 MPa | 36.2 kW |
| | *32.8 gpm* | *2540 psig* | *48.6 hp* |
| IV. | Hydraulic fluid temperature at flow meter: | | |
| | 56.9 °C | | |
| | *134 °F* | | |
| | This hydraulic system does not use an accumulator. Opening and closing pressures of the unloading valve could not be measured. | | |



3.2.2 POWER LIFT TEST Category III, Walterscheid lower links.
Date of test: 17 March 1998. Tests results extracted from OECD test 2/1792 on the John Deere 8300T, which is mechanically equivalent.

| | Hitch points | Frame |
|---|---|---|
| Lower hitch points above ground - down position: | 199 mm | 185 mm |
| Vertical movement - without load: | 856 mm | 953 mm |
| with load: | 841 mm | 917 mm |
| Maximum corrected force exerted through full range: | 56.7 kN | 55.8 kN |
| Corresponding pressure: | 18.0 MPa | 18.0 MPa |
| Moment about rear axle: | 70.5 kNm | 103.2 kNm |
| Maximum mast tilt angle | | 6.1 degrees |

Lifting height relative to horizontal position of lower links.

| mm | | -385 | -373 | -296 | -198 | -98 | 1 | 100 | 201 | 301 | 402 | 469 | 532 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Corrected lift forces | | | | | | | | | | | | | |
| At the Hitch point | kN | -- | 56.7 | 59.7 | 64.0 | 67.7 | 71.2 | 74.3 | 77.1 | 80.5 | 84.0 | 86.3 | -- |
| at the frame | kN | 55.8 | 57.7 | -- | 60.3 | 62.6 | 64.1 | 65.2 | 65.8 | 66.1 | -- | 65.5 | 64.6 |
| Corresponding pressure | 18.0 Mpa | | | | | | | | | | | | |

## OECD Drawbar Data (SI)

Date of tests: 10,15-May-00 | Fuel density: 0.847 kg/l

Type of track: Concrete | Test number: 1774

3.3.1 Maximum power in tested gears (unballasted, Crwl) | Tire pressure: trk kPa, rear trk kPa, front | Drawbar Height: 470 mm

| Gear | Gear Designation | Power | Drawbar pull | Speed | Engine speed | Slip | Fuel | | Temperature | | | Atmospheric conditions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | SFC | SFE | Fuel | Coolant | Oil | Temperature | Relative humidity | Pressure |
| | | kW | kN | km/h | rev/min | % | kg/kW.h | kW.h/l | °C | °C | °C | °C | % | kPa |
| 2 | 2 | 62.07 | 106.34 | 2.10 | 2262 | 14 | 0.397 | 2.13 | 57 | 83 | 100 | 15 | 59 | 97.2 |
| 3 | 3 | 81.05 | 108.89 | 2.68 | 2255 | 14 | 0.360 | 2.35 | 60 | 85 | 104 | 17 | 52 | 98.0 |
| 4 | 4 | 95.99 | 104.18 | 3.32 | 2159 | 13 | 0.332 | 2.55 | 59 | 86 | 102 | 17 | 57 | 97.2 |
| 5 | 5 | 114.39 | 102.16 | 4.03 | 2137 | 12 | 0.313 | 2.71 | 62 | 90 | 106 | 18 | 54 | 97.2 |
| 6 | 6 | 121.95 | 102.21 | 4.30 | 2039 | 12 | 0.304 | 2.79 | 61 | 88 | 106 | 18 | 54 | 97.2 |
| 7 | 7 | 130.45 | 93.68 | 5.01 | 2001 | 8 | 0.285 | 2.97 | 61 | 89 | 108 | 18 | 54 | 97.2 |
| 8 | 8 | 134.11 | 82.70 | 5.84 | 2001 | 5 | 0.277 | 3.06 | 62 | 91 | 109 | 18 | 54 | 97.1 |
| 9 | 9 | 136.26 | 73.33 | 6.69 | 1999 | 4 | 0.272 | 3.11 | 62 | 91 | 109 | 18 | 54 | 97.1 |
| 10 | 10 | 137.00 | 64.66 | 7.63 | 2000 | 3 | 0.272 | 3.12 | 61 | 92 | 108 | 19 | 56 | 97.1 |
| 11 | 11 | 136.71 | 56.66 | 8.69 | 1997 | 2 | 0.272 | 3.11 | 62 | 91 | 109 | 21 | 53 | 97.1 |
| 12 | 12 | 136.04 | 49.68 | 9.86 | 1999 | 1 | 0.274 | 3.09 | 62 | 93 | 108 | 21 | 50 | 97.1 |
| 13 | 13 | 133.54 | 38.08 | 12.63 | 2003 | 1 | 0.280 | 3.02 | 61 | 93 | 109 | 22 | 47 | 97.1 |
| 3.3.2 Fuel consumption | | | | | | | | | | | | | | |
| 3.3.2.1 | | In selected gear at maximum power at rated engine speed. | | | | | | | | | | | | |
| 10 | 10 | 117.68 | 49.88 | 8.49 | 2201 | 1.42 | 0.295 | 2.87 | 63 | 91 | 110 | 20 | 52 | 97.1 |
| 3.3.2.1.1 | | 75% of pull at maximum power at rated engine speed | | | | | | | | | | | | |
| 10 | 10 | 90.88 | 37.39 | 8.75 | 2258 | 1.03 | 0.330 | 2.57 | 61 | 89 | 107 | 23 | 45 | 97.0 |
| 3.3.2.1.2 | | 50% of pull at maximum power at rated engine speed | | | | | | | | | | | | |
| 10 | 10 | 60.99 | 24.91 | 8.82 | 2267 | 0.79 | 0.391 | 2.16 | 59 | 86 | 101 | 24 | 43 | 96.9 |
| 3.3.2.1.3 | | Higher gear at reduced engine speed, same pull and travel speed as 3.3.2.1.1 | | | | | | | | | | | | |
| 11 | 11 | 90.87 | 37.42 | 8.74 | 1992 | 1.11 | 0.302 | 2.80 | 58 | 88 | 104 | 23 | 45 | 97.0 |
| 3.3.2.1.4 | | Higher gear at reduced engine speed, same pull and travel speed as 3.3.2.1.2 | | | | | | | | | | | | |
| 11 | 11 | 61.05 | 24.90 | 8.83 | 2005 | 0.71 | 0.355 | 2.39 | 56 | 85 | 99 | 24 | 43 | 96.9 |
| 3.3.2.1.5 | | Higher gear at reduced engine speed, same pull and travel speed as 3.3.2.1.1 | | | | | | | | | | | | |
| 12 | 12 | 90.93 | 37.38 | 8.76 | 1769 | 1.11 | 0.284 | 2.98 | 57 | 88 | 102 | 24 | 42 | 97.0 |
| 3.3.2.1.6 | | Higher gear at reduced engine speed, same pull and travel speed as 3.3.2.1.2 | | | | | | | | | | | | |
| 12 | 12 | 61.07 | 24.87 | 8.84 | 1779 | 0.63 | 0.327 | 2.59 | 55 | 86 | 96 | 24 | 46 | 96.9 |
| 3.3.2.2 | | In selected gear nearest to 7.5 km/h at rated engine speed. | | | | | | | | | | | | |
| 9 | 9 | 118.43 | 57.08 | 7.47 | 2195 | 2.04 | 0.294 | 2.88 | 62 | 91 | 109 | 19 | 55 | 97.1 |
| 3.3.2.2.1 | | 75% of pull at maximum power at rated engine speed | | | | | | | | | | | | |
| 9 | 9 | 91.96 | 42.74 | 7.75 | 2258 | 1.18 | 0.325 | 2.61 | 61 | 88 | 107 | 22 | 47 | 97.1 |
| 3.3.2.2.2 | | 50% of pull at maximum power at rated engine speed | | | | | | | | | | | | |
| 9 | 9 | 61.80 | 28.50 | 7.81 | 2267 | 0.95 | 0.385 | 2.20 | 60 | 85 | 104 | 24 | 43 | 97.0 |
| 3.3.2.2.3 | | Higher gear at reduced engine speed, same pull and travel speed as 3.3.2.2.1 | | | | | | | | | | | | |
| 10 | 10 | 91.90 | 42.79 | 7.73 | 1999 | 1.18 | 0.297 | 2.85 | 58 | 86 | 103 | 23 | 44 | 97.0 |
| 3.3.2.2.4 | | Higher gear at reduced engine speed, same pull and travel speed as 3.3.2.2.2 | | | | | | | | | | | | |
| 10 | 10 | 61.77 | 28.46 | 7.81 | 2012 | 0.79 | 0.346 | 2.44 | 56 | 85 | 97 | 24 | 43 | 97.0 |
| 3.3.2.2.5 | | Higher gear at reduced engine speed, same pull and travel speed as 3.3.2.2.1 | | | | | | | | | | | | |
| 11 | 11 | 91.91 | 42.80 | 7.73 | 1766 | 1.26 | 0.280 | 3.02 | 57 | 90 | 103 | 23 | 45 | 97.0 |
| 3.3.2.2.6 | | Higher gear at reduc[illegible]ngine speed, same pull and travel speed as 3.3.2.2.2 | | | | | | | | | | | | |
| 11 | 11 | 61.78 | 28.43 | 7.81 | 1779 | 0.79 | 0.320 | 2.64 | 54 | | 97 | 24 | 43 | 96.9 |

4.1 Drawbar Power:Ballasted - 2200 rev/min

**OECD Drawbar Data (SI)**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date of tests:** 12-May-00 | | | | | | **Fuel density:** 0.847 kg/l | | | | | | | | |
| **Type of track:** Concrete | | | | | | **Test number:** 1774 | | | | | | | | |
| **Maximum power in tested gears (ballasted, Crwl)** | | | | | | **Tire pressure:** trk kPa, rear trk kPa, front | | | | | | **Drawbar Height:** 470 mm | | |
| **Gear** | **Gear Designation** | **Power** | **Drawbar pull** | **Speed** | **Engine speed** | **Slip** | **Fuel** | | **Temperature** | | | **Atmospheric conditions** | | |
| | | | | | | | **SFC** | **SFE** | **Fuel** | **Coolant** | **Oil** | **Temperature** | **Relative humidity** | **Pressure** |
| | | **kW** | **kN** | **km/h** | **rev/min** | **%** | **kg/kW.h** | **kW.h/l** | **°C** | **°C** | **°C** | **°C** | **%** | **kPa** |
| 3 | 3 | 87.33 | 116.68 | 2.69 | 2251 | 13 | 0.349 | 2.42 | 59 | 87 | 105 | 17 | 66 | 97.0 |
| 4 | 4 | 100.83 | 99.31 | 3.66 | 2203 | 6 | 0.311 | 2.72 | 60 | 89 | 108 | 16 | 65 | 97.1 |
| 5 | 5 | 117.34 | 95.00 | 4.45 | 2199 | 6 | 0.297 | 2.85 | 60 | 88 | 107 | 16 | 65 | 97.1 |
| 6 | 6 | 118.02 | 83.41 | 5.09 | 2202 | 4 | 0.295 | 2.87 | 60 | 88 | 107 | 17 | 57 | 97.2 |
| 7 | 7 | 119.80 | 74.22 | 5.81 | 2196 | 3 | 0.291 | 2.91 | 61 | 91 | 110 | 17 | 57 | 97.2 |
| 8 | 8 | 119.66 | 64.92 | 6.64 | 2202 | 2 | 0.290 | 2.92 | 62 | 91 | 109 | 17 | 57 | 97.2 |
| 9 | 9 | 119.32 | 57.15 | 7.52 | 2202 | 2 | 0.292 | 2.90 | 62 | 92 | 111 | 18 | 58 | 97.2 |
| 10 | 10 | 117.98 | 49.88 | 8.51 | 2202 | 2 | 0.296 | 2.86 | 62 | 90 | 109 | 18 | 58 | 97.3 |
| 11 | 11 | 116.35 | 43.38 | 9.65 | 2200 | 1 | 0.300 | 2.82 | 62 | 91 | 110 | 19 | 39 | 97.3 |
| 12 | 12 | 114.14 | 37.68 | 10.91 | 2199 | 1 | 0.306 | 2.77 | 62 | 91 | 109 | 19 | 36 | 97.3 |
| 13 | 13 | 110.57 | 28.60 | 13.92 | 2200 | 1 | 0.317 | 2.67 | 62 | 92 | 111 | 21 | 35 | 97.3 |

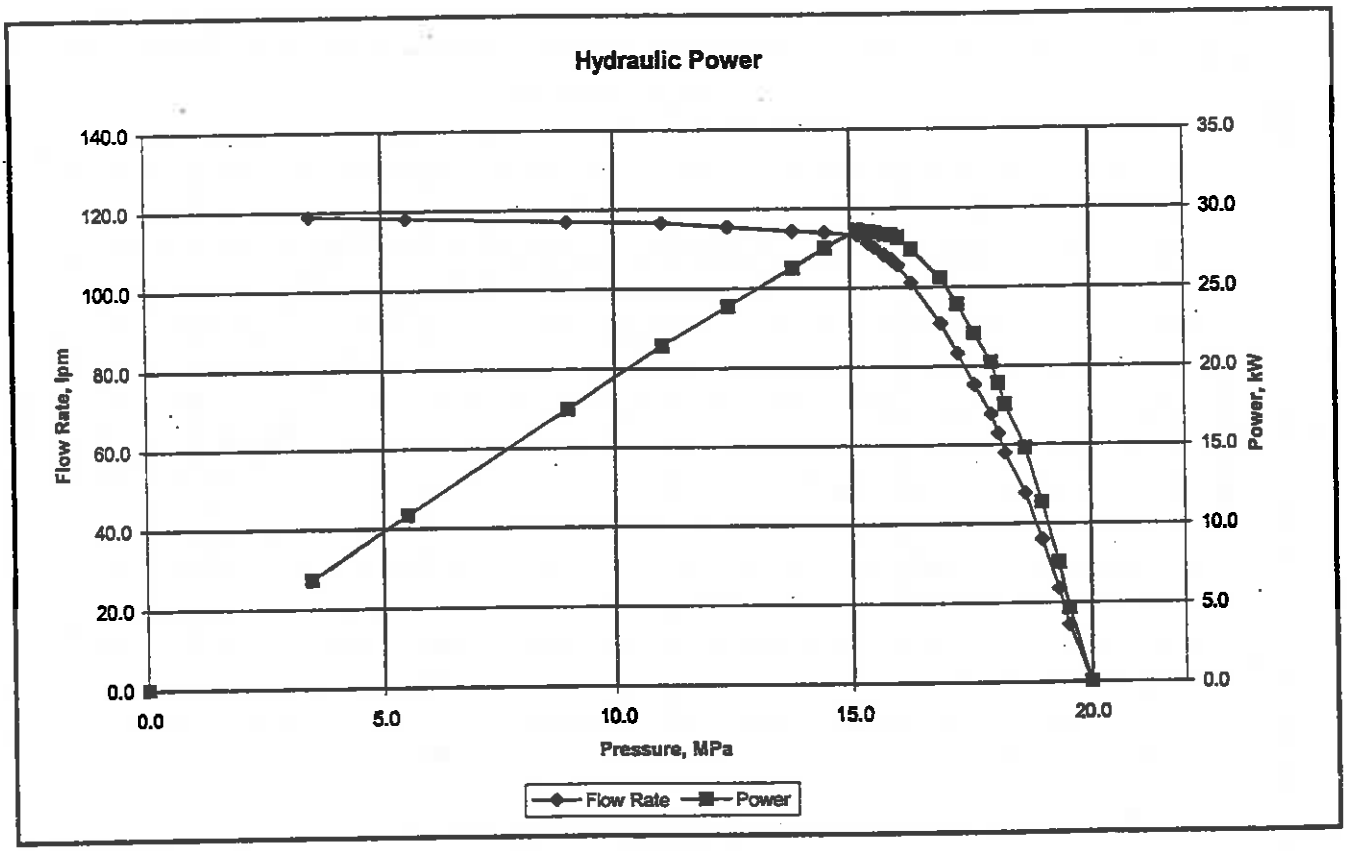
## 4.2 Drawbar Power: Ballasted - 2000 rev/min

**OECD Drawbar Data (SI)**

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date of tests: 12-May-00** | | | | | **Fuel density:** | **0.847 kg/l** | | | | | | | | |
| **Type of track: Concrete** | | | | | **Test number:** | **1774** | | | | | | | | |
| **Maximum power in tested gears (ballasted, Crwl)** | | | | | | **Tire pressure:** | **trk kPa, rear** | | **trk kPa, front** | | | **Drawbar Height:** | **470 mm** | |
| **Gear** | **Gear Designation** | **Power** | **Drawbar pull** | **Speed** | **Engine speed** | **Slip** | **Fuel** | | **Temperature** | | | **Atmospheric conditions** | | |
| | | | | | | | **SFC** | **SFE** | **Fuel** | **Coolant** | **Oil** | **Temperature** | **Relative humidity** | **Pressure** |
| | | **kW** | **kN** | **km/h** | **rev/min** | **%** | **kg/kW.h** | **kW.h/l** | **°C** | **°C** | **°C** | **°C** | **%** | **kPa** |
| **3** | **3** | **86.28** | **116.40** | **2.67** | **2251** | **14** | **0.354** | **2.39** | **59** | **87** | **106** | **17** | **70** | **97.0** |
| **4** | **4** | **104.41** | **110.71** | **3.40** | **2118** | **9** | **0.309** | **2.74** | **60** | **89** | **107** | **16** | **65** | **97.1** |
| **5** | **5** | **121.76** | **109.31** | **4.01** | **2086** | **10** | **0.300** | **2.82** | **60** | **87** | **107** | **16** | **61** | **97.1** |
| **6** | **6** | **129.96** | **105.98** | **4.41** | **2001** | **9** | **0.286** | **2.96** | **60** | **91** | **109** | **17** | **57** | **97.2** |
| **7** | **7** | **134.27** | **94.13** | **5.14** | **2000** | **6** | **0.277** | **3.06** | **61** | **93** | **111** | **17** | **57** | **97.2** |
| **8** | **8** | **136.72** | **83.22** | **5.91** | **2000** | **4** | **0.272** | **3.12** | **61** | **92** | **111** | **18** | **54** | **97.2** |
| **9** | **9** | **137.85** | **73.59** | **6.74** | **2000** | **3** | **0.270** | **3.14** | **61** | **94** | **111** | **18** | **54** | **97.2** |
| **10** | **10** | **137.91** | **64.75** | **7.67** | **2001** | **2** | **0.271** | **3.13** | **61** | **91** | **110** | **19** | **39** | **97.3** |
| **11** | **11** | **137.04** | **56.65** | **8.71** | **1997** | **2** | **0.272** | **3.11** | **61** | **91** | **110** | **19** | **39** | **97.3** |
| **12** | **12** | **136.24** | **49.57** | **9.89** | **2004** | **2** | **0.273** | **3.10** | **62** | **92** | **110** | **19** | **36** | **97.3** |
| **13** | **13** | **133.02** | **37.95** | **12.62** | **1999** | **1** | **0.280** | **3.03** | **61** | **93** | **111** | **20** | **34** | **97.3** |

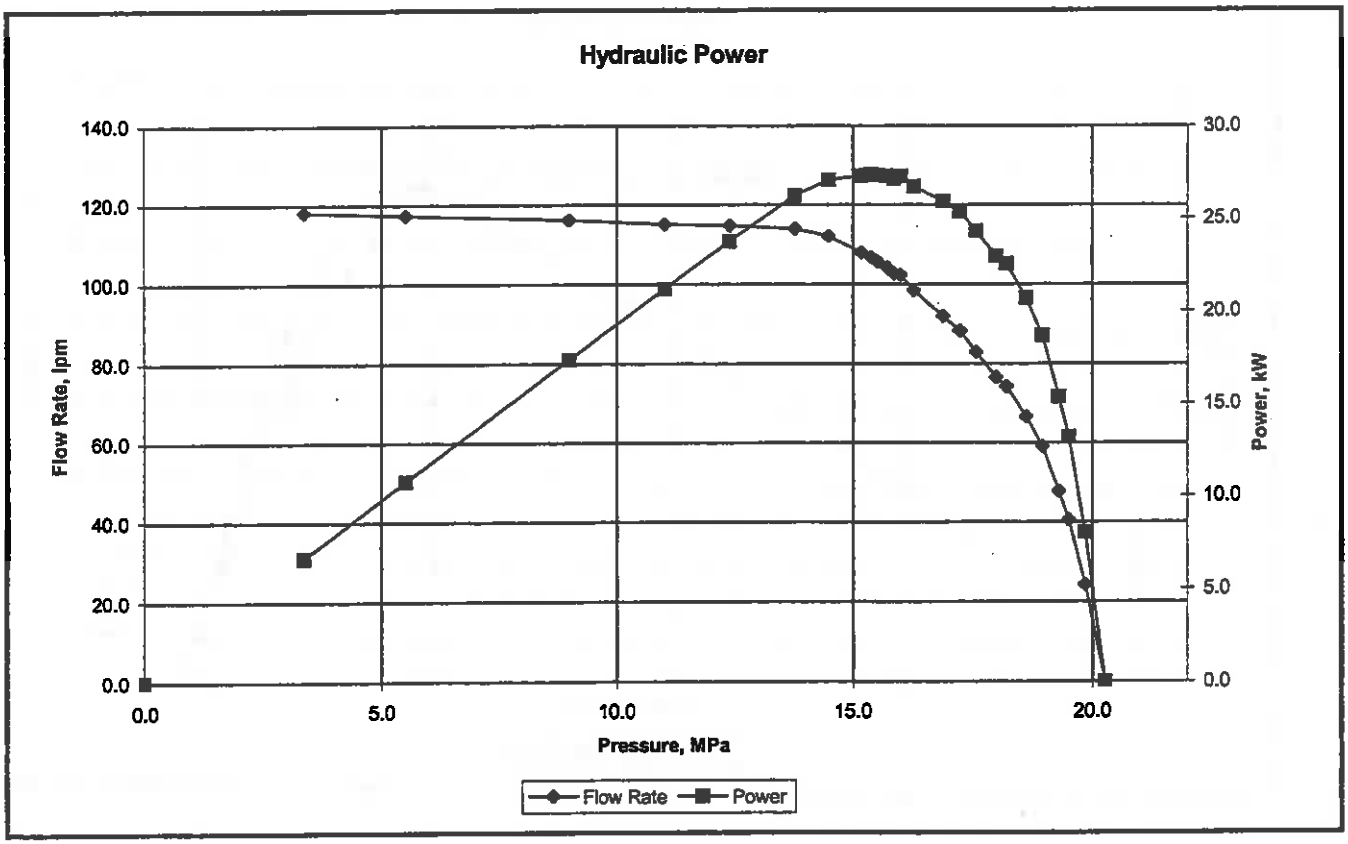
## 4.3 Hydraulic Power: Standard pump–one outlet

| | | | |
|---|---|---|---|
| Date of Test: | 5-May-00 | | |
| Location of Test-City-State: | | Tractor Test Lab, Lincoln, NE, USA | |
| Tapping point used for test: | | Remote hydraulic outlets | |
| I. | Sustained pressure with pump stalled: | | |
| | 19.99 MPa | | |
| | *2900 psig* | | |
| II. | Pump delivery rate at minimum pressure at rated engine speed: | | |
| | 118.9 l/min | | |
| | *31.4 gpm* | | |
| III. | Flow rate, pressure, power: | | |
| | 90% of relief valve setting | | |
| | 67.8 l/min | 17.93 MPa | 20.2 kW |
| | *17.9 gpm* | *2600 psig* | *27.2 hp* |
| | Maximum hydraulic power: | | |
| | 113.2 l/min | 15.17 MPa | 28.6 kW |
| | *29.9 gpm* | *2200 psig* | *38.4 hp* |
| IV. | Hydraulic fluid temperature at flow meter: | | |
| | 68.7 °C | | |
| | *156 °F* | | |
| | This hydraulic system does not use an accumulator. Opening and closing pressures of the unloading valve could not be measured. | | |



## 4.4 Hydraulic Power: High flow pump - one outlet

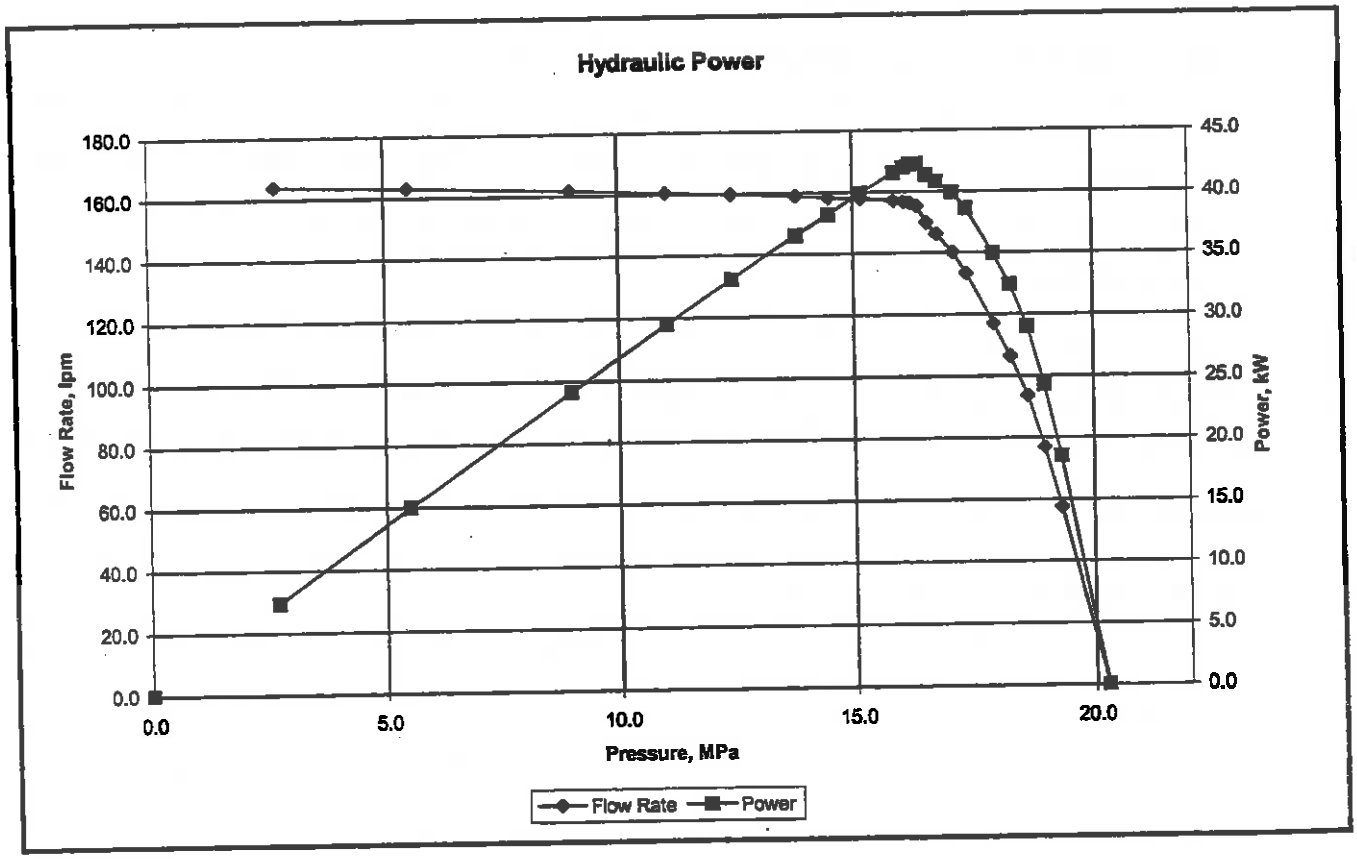
| | | | |
|---|---|---|---|
| Date of Test: | 15-May-00 | John Deere 8210T | |
| Location of Test-City-State: | | Tractor Test Lab, Lincoln, NE, USA | |
| Tapping point used for test: | | Remote hydraulic outlets | |
| I. | Sustained pressure with pump stalled: | | |
| | 20.27 MPa | | |
| | *2940 psig* | | |
| II. | Pump delivery rate at minimum pressure at rated engine speed: | | |
| | 118.1 l/min | | |
| | *31.2 gpm* | | |
| III. | Flow rate, pressure, power: | | |
| | 90% of relief valve setting | | |
| | 74.2 l/min | 18.20 MPa | 22.5 kW |
| | *19.6 gpm* | *2640 psig* | *30.2 hp* |
| | Maximum hydraulic power: | | |
| | 106.7 l/min | 15.38 MPa | 27.4 kW |
| | *28.2 gpm* | *2230 psig* | *36.7 hp* |
| IV. | Hydraulic fluid temperature at flow meter: | | |
| | 66.7 °C | | |
| | *152 °F* | | |
| | This hydraulic system does not use an accumulator. Opening and closing pressures of the unloading valve could not be measured. | | |



## 4.5 Hydraulic Power: High flow pump - two outlets

| | | | |
|---|---|---|---|
| Date of Test: | 15-May-00 | John Deere 8210T | |
| Location of Test-City-State: | | Tractor Test Lab, Lincoln, NE, USA | |
| Tapping point used for test: | | Remote hydraulic outlets | |
| I. | Sustained pressure with pump stalled: | | |
| | 20.27 MPa | | |
| | *2940 psig* | | |
| II. | Pump delivery rate at minimum pressure at rated engine speed: | | |
| | 163.9 l/min | | |
| | *43.3 gpm* | | |
| III. | Flow rate, pressure, power: | | |
| | 90% of relief valve setting | | |
| | 106.4 l/min | 18.27 MPa | 32.4 kW |
| | *28.1 gpm* | *2650 psig* | *43.4 hp* |
| | Maximum hydraulic power: | | |
| | 155.2 l/min | 16.34 MPa | 42.3 kW |
| | *41.0 gpm* | *2370 psig* | *56.7 hp* |
| IV. | Hydraulic fluid temperature at flow meter: | | |
| | 63.8 °C | | |
| | *147 ° F* | | |

This hydraulic system does not use an accumulator.
Opening and closing pressures of the unloading valve could not be measured.



4.6 POWER LIFT TEST Category III, N.A. Quick attach linkage.
Date of test: 18 March 1998. Tests results extracted from OECD test 2/1792 on the John Deere 8300T, which is mechanically equivalent.

| | Hitch points | Frame |
|---|---|---|
| Lower hitch points above ground - down position: | 203 mm | 220 mm |
| Vertical movement - without load: | 826 mm | 820 mm |
| with load: | 813 mm | 801 mm |
| Maximum corrected force exerted through full range: | 61.9 kN | 70.1 kN |
| Corresponding pressure: | 17.8 MPa | 17.8 MPa |
| Moment about rear axle: | 76.2 kNm | 129.0 kNm |
| Maximum mast tilt angle | | 4.0 degrees |

Lifting height relative to horizontal position of lower links.

| mm | | -369 | -352 | -299 | -201 | -98 | 1 | 99 | 201 | 300 | 382 | 407 | 449 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Corrected lift forces | | | | | | | | | | | | | |
| At the Hitch point | kN | 61.9 | -- | 64.6 | 68.9 | 72.7 | 76.1 | 78.8 | 81.6 | 84.5 | 86.9 | 87.5 | -- |
| at the frame | kN | -- | 71.0 | 70.0 | 70.9 | 71.7 | 72.4 | 72.7 | 72.7 | -- | 72.1 | 70.8 | 70.1 |
| Corresponding pressure | 17.8 Mpa | | | | | | | | | | | | |

### 4.7.1 Results presentation according to OECD standard code (Annex 1)

| Gear Number | Drawbar Pull | Measured Traveling Speed | Engine Speed | Number of Driving Wheels | Sound Level | | |
|---|---|---|---|---|---|---|---|
| | kN | km/h | rev/min | | dB(A) | | |
| 4.7.1.1 Unloaded test in the gear giving the forward speed nearest to 7.5 km/h | | | | | | | |
| 9 | 0 | 7.87 | 2290 | Track | 76.6 | | |
| | | | | | | | |
| 4.7.1.2 Unloaded test in the gear giving the maximum forward speed | | | | | | | |
| 16 | 0 | 29.9 | 2280 | Track | 79.2 | | |
| | | | | | | | |
| 4.7.1.3 Tests with a drawbar pull for which the tractor gives the maximum sound level [combination of gear giving the nearest nominal forward speed to 7.5 km/h and also in any gear with a sound level increase of at least 1 dB(A)] | | | | | | | |
| 9 | 55.9 | 7.58 | 2232 | Track | 78.6 | | |
| | | | | | | | |
| | | | | | | | |

### 4.7.2 Results presentation (without load) according to OECD standard code (Annex 2)

| Gear Number | Drawbar Pull | Measured Traveling Speed | Engine Speed | Number of Driving Wheels | Sound Level | | |
|---|---|---|---|---|---|---|---|
| | kN | km/h | rev/min | | dB(A) | | |
| 4.7.2.1 Unloaded test in the gear giving the forward speed nearest to 7.5 km/h | | | | | | | |
| 9 | 0 | 7.87 | 2290 | Track | 76.6 | | |
| | | | | | | | |

## 4.8 Measurement of External Noise Level

| | |
|---|---|
| Date of Test | May 15, 2000 |
| 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 | 22.9 km / h |
| Noise Level | 89.7 dB(A) |

## 5. REPAIRS

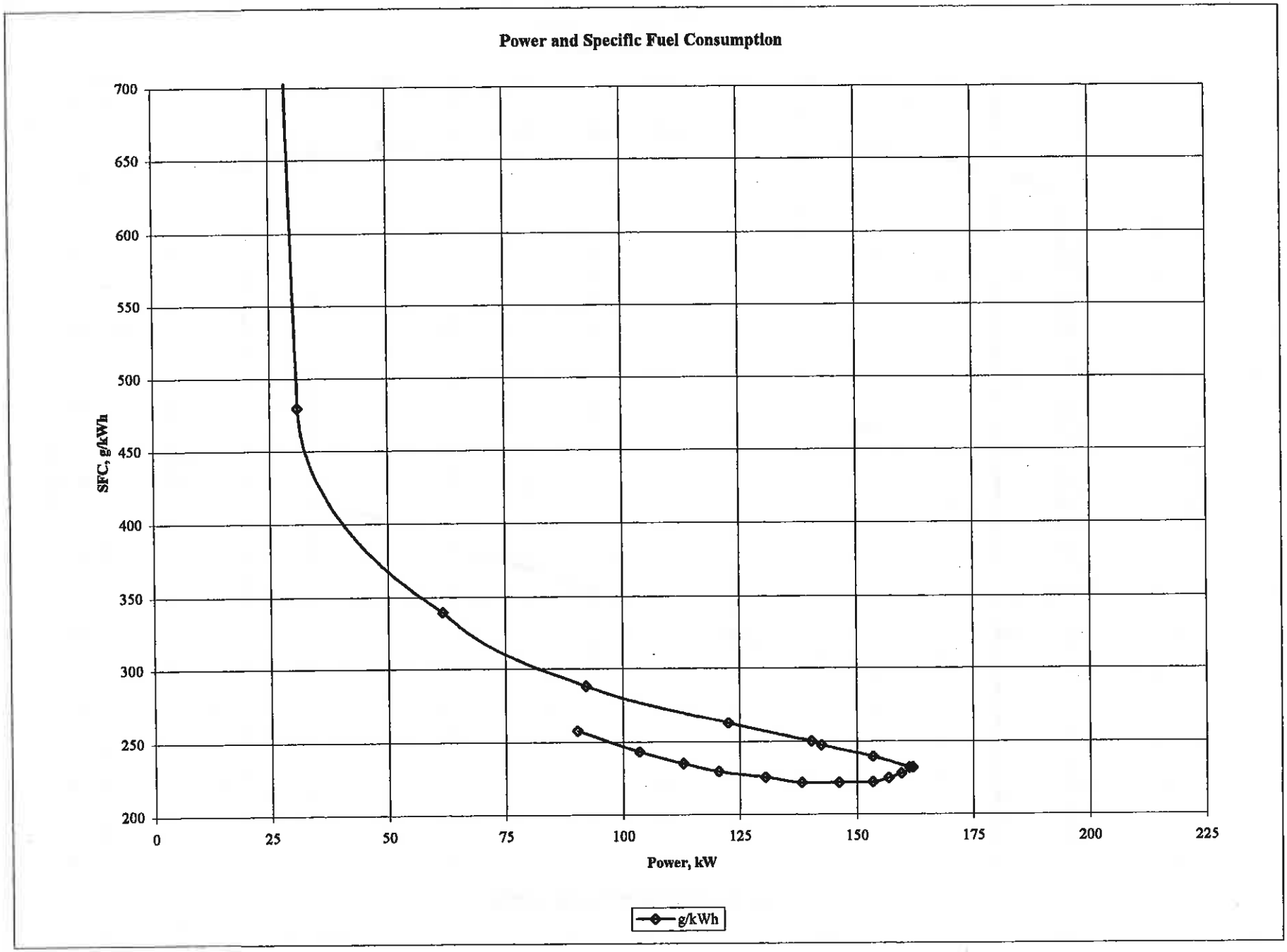
None

## 6. REMARKS

The 8210T engine has an electronic control system which provides a vehicle protection system to avoid overloading the drive train. This system provides three different engine power levels. The engine produces up to 165 PTO hp when the transmission is in forward gears 1 through 4 and the PTO is not engaged. The engine produces up to 185 PTO hp in all other applications.

Power and Equivalent Crankshaft Torque
Power, kW
0
50
100
150
200
250
Engine Speed, rev/min
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400
Standard PTO Speed - 1000 rev/min
Equivalent Crankshaft Torque, Nm
0
250
500
750
1000
1250
kW
Nm

Specific Fuel Consumption and Fuel Rate
SFC, g/kWh
Fuel Rate, kg/h
Engine Speed, rev/min
g/kWh
kg/h
Standard PTO Speed - 1000 rev/min


Power and Specific Fuel Consumption
SFC, g/kWh
700
650
600
550
500
450
400
350
300
250
200
0
25
50
75
100
125
150
175
200
225
Power, kW
g/kWh