SUMMARY OF OECD TEST 1841—NEBRASKA SUMMARY 503
KUBOTA M120DT DIESEL
16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed (PTO speed—1086 rpm)					
100.3 *(74.8)*	2400	6.39 *(24.17)*	0.455 *(0.277)*	15.68 *(3.09)*	
Maximum Power (2 hours)					
103.1 *(76.9)*	2260	6.23 *(23.61)*	0.432 *(0.263)*	16.55 *(3.26)*	
Standard Power Take-off speed (1000 rpm)					
102.3 *(76.3)*	2211	6.11 *(23.12)*	0.427 *(0.260)*	16.74 *(3.30)*	
VARYING POWER AND FUEL CONSUMPTION					
100.3 *(74.8)*	2400	6.39 *(24.17)*	0.455 *(0.277)*	15.68 *(3.09)*	Air temperature
86.6 *(64.6)*	2439	5.78 *(21.89)*	0.477 *(0.290)*	14.97 *(2.95)*	72°F *(22°C)*
65.7 *(49.0)*	2465	4.83 *(18.28)*	0.525 *(0.319)*	13.60 *(2.68)*	Relative humidity
44.4 *(33.1)*	2494	3.93 *(14.86)*	0.631 *(0.384)*	11.32 *(2.23)*	82%
22.5 *(16.8)*	2528	3.08 *(11.66)*	0.977 *(0.594)*	7.31 *(1.44)*	Barometer
-- --	2565	2.13 *(8.07)*	-- --	-- --	30.1" Hg *(101.8 kPa)*

Maximum Torque -307.3 lb.-ft. *(416.7 Nm)* at 1500 rpm
Maximum Torque Rise -39.9%
Torque rise at 1900 engine rpm -21%

Location of tests: Institute of Agricultural Machinery Bio-oriented Technology Research Advancement Institution (IAM-Brain) Omiya, Japan

Dates of tests: May, 1999
Operator sound level - December 23, 2005

Manufacturer: Kubota Corporation, 1-2-47 Shikitsu-higashi, Naniwa-ku, Osaka City, Osaki, Japan

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.858 **Fuel weight** 7.14 lbs/gal *(0.856 kg/l)* **Oil SAE** 10W30 **API service classification** CD **Oil consumption for 10 hours** 0.08 lb *(36 gm)* **Transmission and hydraulic lubricant** SAE 75W/80 API GL-3 **Front axle lubricant** SAE 75W/80 API GL-3

ENGINE: Make Kubota Diesel **Type** five cylinder vertical with turbocharger **Serial No.** F5802-XC5451 **Crankshaft** lengthwise **Rated engine speed** 2400 **Bore and stroke** 4.291" x 4.922" *(109.0 mm x 125.0 mm)* **Compression ratio** 19.0 to 1 **Displacement** 356 cu in *(5832 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: Type front wheel assist **Serial No.** M12-50207 **Tread width** rear 59.4" *(1510 mm)* to 78.3" *(1990 mm)* front 64.6" *(1640 mm)* to 68.5" *(1740 mm)* **Wheel base** 105.9" *(2690 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (8) range operator controlled power shift **Nominal travel speeds mph *(km/h)*** first 1.24 *(1.99)* second 1.53 *(2.47)* third 1.92 *(3.09)* fourth 2.41 *(3.88)* fifth 3.02 *(4.86)* sixth 3.76 *(6.05)* seventh 4.31 (*6.94)* eighth 4.70 *(7.57)* ninth 5.37 *(8.64)* tenth 5.91 *(9.51)* eleventh 6.72 *(10.81)* twelfth 8.43 *(13.57)* thirteenth 10.55 *(16.98)* fourteenth 13.14 *(21.15)* fifteenth 16.44 *(26.45)* sixteenth 20.64 *(33.22)* reverse 1.24 *(2.00)*, 1.55 *(2.49)*, 1.94 *(3.12)*, 2.44 *(3.92)*, 3.04 *(4.90)*, 3.80 *(6.11)*, 4.35 *(7.00)*, 4.75 *(7.64)*, 5.42, *(8.72)*, 5.96 *(9.59)*, 6.77 *(10.90)*, 8.51, *(13.69)*, 10.64 *(17.13)*, 13.25 *(21.33)*, 16.59 *(26.68)*, 20.82 *(33.51)* **Clutch** multiple wet disc operated by foot pedal **Brakes** multiple wet disc operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2035 engine rpm or 1000 rpm at 2211 engine rpm **Unladen tractor mass** 9175 lb *(4163 kg)*

DRAWBAR PERFORMANCE
BALLASTED - FRONT DRIVE ENGAGED
FUEL CONSUMPTION CHARACTERISTICS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F cool-ing med	(°C) Air dry bulb	Barom. inch Hg *(kPa)*
75% of Pull at Maximum Power—Five Hours 7th (1H) Gear									
73.2 *(54.6)*	6505 *(28.9)*	4.22 *(6.80)*	2444	4.2	0.570 *(0.347)*	12.54 *(2.47)*	185 *(85)*	90 *(32)*	29.8 *(101.0)*
MAXIMUM POWER IN SELECTED GEARS									
3rd (3L) Gear									
57.7 *(43.0)*	12565 *(55.9)*	1.72 *(2.77)*	2441	12.8	0.637 *(0.388)*	11.21 *(2.21)*	187 *(86)*	79 *(26)*	29.8 *(100.9)*
4th (4L) Gear									
70.4 *(52.5)*	12185 *(54.2)*	2.17 *(3.49)*	2423	11.8	0.591 *(0.360)*	12.08 *(2.38)*	187 *(86)*	79 *(26)*	29.8 *(100.9)*
5th (5L) Gear									
84.4 *(62.9)*	11780 *(52.4)*	2.69 *(4.32)*	2361	10.3	0.539 *(0.328)*	13.25 *(2.61)*	187 *(86)*	79 *(26)*	29.8 *(100.9)*
6th (6L) Gear									
85.8 *(64.0)*	9395 *(41.8)*	3.42 *(5.51)*	2324	6.5	0.527 *(0.321)*	13.55 *(2.67)*	189 *(87)*	77 *(25)*	29.8 *(100.9)*
7th (1H) Gear									
88.4 *(65.9)*	8655 *(38.5)*	3.83 *(6.16)*	2245	5.9	0.497 *(0.303)*	14.35 *(2.83)*	189 *(87)*	77 *(25)*	29.8 *(100.9)*
8th (7L) Gear									
89.3 *(66.6)*	8140 *(36.2)*	4.11 *(6.62)*	2206	5.3	0.490 *(0.298)*	14.57 *(2.87)*	187 *(86)*	77 *(25)*	29.8 *(101.0)*
9th (2H) Gear									
88.9 *(66.3)*	6990 *(31.1)*	4.77 *(7.67)*	2213	4.5	0.493 *(0.300)*	14.47 *(2.85)*	187 *(86)*	77 *(25)*	29.8 *(101.0)*
10th (8L) Gear									
86.6 *(64.6)*	6315 *(28.1)*	5.14 *(8.28)*	2158	3.7	0.496 *(0.302)*	14.41 *(2.84)*	187 *(86)*	77 *(25)*	29.8 *(100.9)*
11th (3H) Gear									
87.6 *(65.3)*	5710 *(25.4)*	5.75 *(9.25)*	2114	3.2	0.487 *(0.296)*	14.67 *(2.89)*	187 *(86)*	77 *(25)*	29.8 *(100.9)*

TIRES, BALLAST AND WEIGHT		**With Ballast**	**Without Ballast**
Rear Tires	-No., size, ply & psi *(kPa)*	Two 18.4R38; **;20 *(140)*	Two 18.4R38;**;20 *(140)*
Ballast	-Liquid (total)	1610 lb *(731 kg)*	None
	-Cast Iron (total)	690 lb *(312 kg)*	None
Front Tires	-No., size, ply & psi *(kPa)*	Two 14.9R24:**; 20 *(140)*	Two 14.9R24;**;20 *(140)*
Ballast	-Liquid (total)	None	None
	-Cast Iron (total)	1340 lb *(609 kg)*	None
Height of Drawbar		21.0 in *(533 mm)*	21.5 in *(546 mm)*
Static Weight with Operator	- Rear	7685 lb *(3486 kg)*	5760 lb *(2613 kg)*
	- Front	5300 lb *(2404 kg)*	3585 lb *(1625 kg)*
	- Total	12985 lb *(5890 kg)*	9345 lb *(4238 kg)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's claims of: 45% PTO torque rise, 72 dB(A) cab sound level, 20. 6 GPM *(78 l/min)* hydraulic flow, nor 3 point lift capacities of 5200 lbs *(2360 kg)*, 6570 lbs *(2980 kg)* with one external cylinder nor 7940 lbs *(3600 kg)* with two external cylinders. The performance results on this summary were taken from OECD tests conducted under the Code I Test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1841,** Nebraska Summary 503, January 27, 2006.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	dB(A)
At no load in 7th (1H) gear	73.9
Bystander in 16th (8H) gear	86.0

CENTER OF GRAVITY

Horizontal distance forward from centerline of rear wheels	40.6" *(1030 mm)*
Vertical distance above roadway	39.4" *(1002 mm)*
Horizontal distance from center of rear wheel tread	0.1" *(1 mm)* to the right

TURNING ON A CONCRETE SURFACE - front drive engaged

Turning radius—with brake right 156" *(3.95 m)* left 155" *(3.93 m)*
Turning radius—without brake right 204" *(5.17 m)* left 199" *(5.15 m)*

Turning space radius—with brake right 168" *(4.26 m)* left 167" *(4.24 m)*
Turning space radius—without brake right 217" *(5.52 m)* left 216" *(5.50 m)*

TURNING ON A CONCRETE SURFACE - Bi-speed switch on

Turning radius—with brake right 166" *(4.22 m)* left 165" *(4.18 m)*
Turning radius—without brake right 171" *(4.28 m)* left 169" *(4.27 m)*

Turning space radius—with brake right 178" *(4.51 m)* left 176" *(4.47 m)*
Turning space radius—without brake right 177" *(4.50 m)* left 176" *(4.49 m)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None

Maximum force exerted through whole range:	3280 lbs *(14.6 kN)*
	4165 lbs *(18.5 kN)* (one external boost cylinder)
	5085 lbs *(22.6 kN)* (two external boost cylinders)
i) Opening pressure of relief valve:	NA
Sustained pressure with relief valve open:	2915 psi *(201 bar)*
ii) Pump delivery rate at minimum pressure:	20.1 GPM *(76.0 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	18.6 GPM *(70.3 l/min)*
Delivery pressure:	1960 psi *(135 bar)*
Power:	21.3 HP *(15.9 kW)*

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	29.5	*750*
B	9.8	*250*
C	12.2	*311*
D	11.5	*303*
E	11.9	*221*
F	6.9	*176*
G	32.2	*817*
H	0.9	*23*
I	11.4	*290*
J	25.3	*641*
K	17.9	*455*
L	40.0	*1015*
M	23.4	*594*
N	35.4	*900*
O	7.8	*195*
P	49.2	*1251*
Q	35.7	*908*
R	26.1	*664*