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2000

## Nebraska Summary: S480 Kubota M5700DT

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# SUMMARY OF OECD TEST 1907—NEBRASKA SUMMARY 480

## KUBOTA M5700DT DIESEL 12 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
<b>MAXIMUM POWER AND FUEL CONSUMPTION</b>					
<b>Rated Engine Speed (PTO speed—655 rpm)</b>					
52.6 (39.2)	2800	3.79 (14.36)	0.504 (0.307)	13.86 (2.73)	
<b>Standard Power Take-off speed (540 rpm)</b>					
50.4 (37.6)	2307	3.37 (12.76)	0.467 (0.284)	14.97 (2.95)	
<b>VARYING POWER AND FUEL CONSUMPTION</b>					
52.6 (39.2)	2800	3.79 (14.36)	0.504 (0.307)	13.86 (2.73)	Air temperature
46.3 (34.5)	2880	3.42 (12.94)	0.516 (0.314)	13.55 (2.67)	75°F (24°C)
35.0 (26.1)	2910	2.78 (10.53)	0.555 (0.338)	12.59 (2.48)	Relative humidity
23.6 (17.6)	2936	2.21 (8.38)	0.655 (0.399)	10.66 (2.10)	22%
11.8 (8.8)	2957	1.71 (6.48)	1.014 (0.617)	6.89 (1.36)	Barometer
--	2983	1.26 (4.77)	--	--	30.3" Hg (102.7 kPa)
Maximum Torque -122.9 lb.-ft. (166.7 Nm) at 1500 rpm Maximum Torque Rise -24.7% Torque rise at 2200 engine rpm -19%					

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

**Dates of tests:** February-March, 2000

**Manufacturer:** Kubota Corporation, Tsukuba Plant  
Aza, Sakanoshinden, Yawaramura, Tsukubagun,  
Ibaraki, Japan

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.839  
**Fuel weight** 6.99 lbs/gal (0.8375 kg/l) **Oil SAE**  
10W30 **API service classification** CD **Oil consumption for 10 hours** 0.03 lb (14 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 **Serial No.** XY7955 **Crankshaft** lengthwise  
**Rated engine speed** 2800 **Bore and stroke** 3.425" x 3.638" (87.0 mm x 92.4 mm) **Compression ratio**  
23.0 to 1 **Displacement** 168 cu in (2746 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner**  
two paper elements **Oil filter** one full flow cartridge **Fuel filter** one paper element **Muffler** vertical  
**Cooling medium temperature control** thermostat

**CHASSIS: Type** front wheel assist **Serial No.** M570-50108 **Tread width** rear 55.9" (1420 mm) to 67.7" (1720 mm) front 52.4" (1330 mm) to 56.3" (1430 mm)  
**Wheel base** 78.7" (2000 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 0.25 (0.40) second 0.34 (0.54) third 0.51 (0.82) fourth 0.76 (1.22) fifth 1.76 (2.83) sixth 2.36 (3.79) seventh 3.62 (5.82) eighth 5.39 (8.67) ninth 6.33 (10.19) tenth 8.49 (13.67) eleventh 13.03 (20.98) twelfth 19.42 (31.26) reverse 0.26 (0.42), 0.35 (0.56), 0.53 (0.86), 0.80 (1.28), 1.83 (2.95), 2.46 (3.96), 3.78 (6.08), 5.63 (9.06), 6.61 (10.64), 8.87 (14.28), 13.62 (21.92), 20.29 (32.65) **Clutch** single dry 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 2307 engine rpm **Unladen tractor mass** 4260 lb (1933 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 (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
<b>75% of Pull at Maximum Power—Five Hours 8th (L4) Gear</b>									
37.7 (28.1)	2715 (12.07)	5.21 (8.39)	2868	3.9	0.606 (0.368)	11.54 (2.27)	167 (75)	70 (21)	30.3 (102.6)
<b>MAXIMUM POWER IN SELECTED GEARS</b>									
6th (L2) Gear									
35.7 (26.6)	6645 (29.56)	2.01 (3.24)	2873	15.2	0.642 (0.390)	10.89 (2.14)	169 (76)	53 (12)	30.2 (102.4)
7th (L3) Gear									
46.9 (35.0)	5500 (24.47)	3.20 (5.15)	2772	9.0	0.565 (0.344)	12.38 (2.44)	167 (75)	52 (11)	30.2 (102.4)
8th (L4) Gear									
48.1 (35.9)	3615 (16.09)	4.99 (8.03)	2767	4.7	0.551 (0.335)	12.69 (2.50)	167 (75)	49 (9)	30.2 (102.4)
9th (H1) Gear									
47.4 (35.4)	3015 (13.41)	5.90 (9.50)	2763	3.8	0.560 (0.340)	12.49 (2.46)	169 (76)	49 (9)	30.2 (102.4)
10th (H2) Gear									
46.8 (34.9)	2190 (9.75)	8.01 (12.89)	2760	2.6	0.567 (0.345)	12.33 (2.43)	167 (75)	50 (10)	30.2 (102.4)

**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 26% torque rise nor 3310 lbs (1500 kg) 3 point lift capacity. 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. **1907**, Nebraska Summary 480, August 19, 2005.

Leonard L. Bashford  
Director

M.F. Kocher  
J.A. Smith  
W.P. Campbell  
Board of Tractor Test Engineers

<b>TIRES, BALLAST AND WEIGHT</b>	<b>With Ballast</b>	<b>Without Ballast</b>
<b>Rear Tires</b>	-No., size, ply & psi (kPa) Two 16.9-28; 6; 17 (118)	Two 16.9-28; 6; 17 (118)
<b>Ballast</b>	-Liquid (total) None	None
	-Cast Iron (total) 1755 lb (795 kg)	None
<b>Front Tires</b>	-No., size, ply & psi (kPa) Two 9.5-22; 6; 28 (196)	Two 9.5-22; 6; 28 (196)
<b>Ballast</b>	-Liquid (total) None	None
	-Cast Iron (total) 890 lb (404 kg)	None
<b>Height of Drawbar</b>	19.0 in (483 mm)	19.7 in (500 mm)
<b>Static Weight with Operator</b>	- Rear 4160 lb (1887 kg)	2705 lb (1228 kg)
	- Front 2910 lb (1320 kg)	1720 lb (780 kg)
	- Total 7070 lb (3207 kg)	4425 lb (2008 kg)

**TRACTOR SOUND LEVEL WITHOUT CAB**

**dB(A)**

At no load in 8th (4L) gear	91.9
Bystander in 12th (4H) gear	84.5

**CENTER OF GRAVITY**

Horizontal distance forward from centerline of rear wheels	30.6" (777 mm)
Vertical distance above roadway	30.5" (774 mm)
Horizontal distance from center of rear wheel tread	0.1" (1 mm) to the left

**TURNING ON A CONCRETE SURFACE**

Turning radius—with brake right	118" (3.00 m) left 119" (3.02 m)
Turning radius—without brake right	150" (3.81 m) left 150" (3.80 m)

Turning space radius—with brake right	129" (3.27 m) left 130" (3.29 m)
Turning space radius—without brake right	162" (4.11 m) left 161" (4.10 m)

**THREE POINT HITCH PERFORMANCE (OECD Static Test)**

CATEGORY: I

Quick Attach: None

Maximum force exerted through whole range:	2840 lbs (12.6 kN)
i) Opening pressure of relief valve:	NA
Sustained pressure with relief valve open:	2740 psi (189 bar)
ii) Pump delivery rate at minimum pressure:	11.0 GPM (41.6 l/min)
iii) Pump delivery rate at maximum hydraulic power:	10.2 GPM (38.6 l/min)
Delivery pressure:	2420 psi (167 bar)
Power:	14.4 HP (10.7 kW)

**HITCH DIMENSIONS AS TESTED—NO LOAD**

	inch	mm
A	22.7	577
B	9.4	240
C	11.6	294
D	10.9	278
E	8.3	210
F	7.7	197
G	26.5	674
H	0.6	16
I	11.9	301
J	18.8	477
K	15.6	395
L	35.2	894
M	22.8	579
N	31.1	790
O	7.9	200
P	36.9	937
Q	31.6	803
R	20.9	530

