

# SUMMARY OF OECD TEST 2578-NEBRASKA SUMMARY 775

## MASSEY FERGUSON 7465 DIESEL

### CONTINUOUSLY VARIABLE TRANSMISSION

#### SISU ENGINE

#### 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—1081 rpm)</b>					
107.8 (80.4)	2200	7.09 (26.82)	0.467 (0.284)	15.22 (3.00)	
<b>Standard Power Take-off Speed(1000 rpm)</b>					
123.9 (92.4)	2035	7.32 (27.70)	0.420 (0.256)	16.93 (3.34)	
<b>Maximum Power (1 hour)</b>					
126.1 (94.0)	2000	7.33 (27.75)	0.414 (0.252)	17.21 (3.39)	

#### VARYING POWER AND FUEL CONSUMPTION

107.8 (80.4)	2200	7.09 (26.82)	0.467 (0.284)	15.22 (3.00)	Air temperature
92.5 (68.9)	2218	6.38 (24.14)	0.491 (0.299)	14.50 (2.86)	72°F (22°C)
69.6 (51.9)	2225	5.35 (20.25)	0.548 (0.333)	13.01 (2.56)	Relative humidity
46.4 (34.6)	2233	4.13 (15.64)	0.635 (0.386)	11.23 (2.21)	63%
23.3 (17.4)	2244	3.00 (11.37)	0.915 (0.557)	7.78 (1.53)	Barometer
--	2251	2.03 (7.70)	--	--	30.4" Hg (103.1 kPa)

Maximum Torque - 406.4 lb.-ft. (551.0 Nm) at 1450 rpm  
 Maximum Torque Rise - 57.8%  
 Torque rise at 1750 engine rpm - 42%

#### DRAWBAR PERFORMANCE (Unballasted - 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>Maximum Power—Turtle 4</b>									
86.3 (64.3)	6960 (31.0)	4.65 (7.48)	2194	3.5	0.579 (0.352)	12.28 (2.42)	184 (84)	63 (17)	29.8 (101.0)
<b>75% of Pull at Maximum Power—Turtle 4</b>									
66.6 (49.7)	5170 (23.0)	4.83 (7.78)	2208	2.9	0.655 (0.398)	10.87 (2.14)	181 (83)	64 (18)	29.8 (101.0)
<b>50% of Pull at Maximum Power—Turtle 4</b>									
46.0 (34.3)	3530 (15.7)	4.89 (7.86)	2219	2.3	0.709 (0.431)	10.05 (1.98)	180 (82)	63 (17)	29.8 (101.0)
<b>75% of Pull at Reduced Engine Speed—Turtle 5</b>									
66.8 (49.8)	5195 (23.1)	4.82 (7.75)	1652	3.2	0.499 (0.303)	14.27 (2.81)	178 (81)	63 (17)	29.8 (101.0)
<b>50% of Pull at Reduced Engine Speed—Turtle 5</b>									
45.7 (34.1)	3480 (15.5)	4.92 (7.92)	1664	1.8	0.561 (0.341)	12.69 (2.50)	176 (80)	63 (17)	29.8 (101.0)

**Location of tests:** Groupement d'Antony, Parc de Touvoie, BP 44 Antony, France 92163

**Dates of tests:** April - May, 2010

**Manufacturer:** AGCO S.A. BP 307, Avenue Blaise Pascal, 60026 Beauvais, France

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.855 **Fuel weight** 7.12 lbs/gal (0.853 kg/l) **Oil SAE** 15W40 **API service classification** CH4 **Transmission and hydraulic lubricant** BP Terrac Tractan 9 10W/40 **Front axle lubricant** SAE 85W140 API GL-5

**ENGINE:** Make Sisu Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** V14985 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.251" x 4.724" (108.0 mm x 120.0 mm) **Compression ratio** 17.4 to 1 **Displacement** 402 cu in (6596 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, radiator for hydraulic and transmission 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.** U328999 **Tread width** rear 55.9" (1420 mm) to 85.4" (2168 mm) front 56.5" (1436 mm) to 86.0" (2184 mm) **Wheelbase** 113.1" (2874 mm) **Hydraulic control system** direct engine drive **Transmission** CVT. A combination of mechanical and hydrostatic sections allow an infinite speed adjustment within the ranges noted. The transmission has two mechanical ranges. **Nominal travel speeds mph (km/h)** forward: Low range 0-18 (0-29), high range 0-25 (0-40) reverse: Low range 0-10 (0-16), high range 0-25 (0-40) **Clutch** a foot pedal controls the hydrostatic oil flow **Brakes** multiple wet disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2062 engine rpm or 1000 rpm at 2030 engine rpm **Unladen tractor mass** 15785 lb (7160 kg)

## DRAWBAR PERFORMANCE

### (Unballasted - Front Drive Engaged) MAXIMUM POWER IN SELECTED GEARS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp. <sup>o</sup> F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Turtle 2									
91.3 (68.1)	14690 (65.4)	2.33 (3.76)	2072	14.4	0.554 (0.337)	12.84 (2.53)	180 (82)	59 (15)	29.8 (101.0)
Turtle 3									
98.4 (73.4)	11915 (53.0)	3.10 (4.99)	2035	8.3	0.525 (0.319)	13.55 (2.67)	180 (82)	61 (16)	29.8 (101.0)
Turtle 4									
102.3 (76.3)	9060 (40.3)	4.23 (6.81)	2014	4.6	0.512 (0.311)	13.91 (2.74)	181 (83)	63 (17)	29.8 (101.0)
Turtle 5									
105.4 (78.6)	6790 (30.2)	5.82 (9.37)	2000	3.5	0.497 (0.302)	14.31 (2.82)	185 (85)	63 (17)	29.8 (101.0)
Turtle 6									
103.8 (77.4)	6185 (27.5)	6.29 (10.13)	2021	3.0	0.487 (0.296)	14.62 (2.88)	181 (83)	63 (17)	29.8 (101.0)
Turtle 7									
97.1 (72.4)	4900 (21.8)	7.43 (11.96)	2031	2.3	0.516 (0.314)	13.81 (2.72)	181 (83)	63 (17)	29.8 (101.0)
Rabbit 8									
94.5 (70.5)	7260 (32.3)	4.88 (7.86)	2021	3.7	0.541 (0.329)	13.15 (2.59)	180 (82)	52 (11)	29.8 (101.0)
Rabbit 9									
97.6 (72.8)	6025 (26.8)	6.08 (9.78)	2051	3.4	0.521 (0.317)	13.65 (2.69)	178 (81)	54 (12)	29.8 (101.0)
Rabbit 10									
98.6 (73.5)	5285 (23.5)	7.00 (11.26)	2016	3.2	0.503 (0.306)	14.16 (2.79)	180 (82)	52 (11)	29.8 (101.0)
Rabbit 11									
100.3 (74.8)	4455 (19.8)	8.44 (13.59)	2021	3.0	0.508 (0.309)	14.01 (2.76)	180 (82)	52 (11)	29.8 (101.0)
Rabbit 12									
95.4 (71.1)	3570 (15.9)	10.01 (16.12)	2024	2.2	0.527 (0.320)	13.51 (2.66)	180 (82)	52 (11)	29.8 (101.0)

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments.

**NOTE 1:** The performance figures on this report apply to tractors equipped with a Sisu engine.

**NOTE 2:** The performance figures on this report are the result of replacing the electronic engine control module of the Massey Ferguson 7480 with the Massey Ferguson 7465 module.

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2578**, Nebraska Summary 775, July 6, 2011.

Roger M. Hoy  
Director

M.F. Kocher  
D.R. Keshwani  
P.J. Jasa  
Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front wheel drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in Turtle 4	67.0	68.0
Bystander		--

#### TIRES, BALLAST AND WEIGHT

**Rear Tires** - No., size, ply & psi(kPa)  
**Front Tires** - No., size, ply & psi(kPa)  
**Height of Drawbar**  
**Static Weight with operator** - Rear  
 - Front  
 - Total

#### Tested without ballast

Two 650/65R38; \*\*; 14(100)  
 Two 540/65R28; \*\*; 16(110)  
 18.9 in (480 mm)  
 9515 lb (4315 kg)  
 6435 lb (2920 kg)  
 15950 lb (7235 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: III

Quick Attach: None

OECD Static test

Maximum force exerted through whole range:	11555 lbs (51.4 kN)
i) Sustained pressure of the open relief valve:	2900 psi (200 bar)
ii) Pump delivery rate at minimum pressure:	30.9 GPM (117.0 l/min)
iii) Pump delivery rate at maximum	
hydraulic power:	28.1 GPM (106.4 l/min)
Delivery pressure:	2320 psi (160 bar)
Power:	38.0 HP (28.3 kW)

### THREE POINT HITCH PERFORMANCE - SAE Test

Observed Maximum Pressure psi. (bar)	2900 (200)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C)	158 (70)
Location:	hydraulic sump
Category:	III
Quick attach:	None

System pressure 2610 psi (180 bar)

Hitch point distance to ground level in. (mm)	9.8 (250)	15.4 (390)	21.4 (543)	26.7 (678)	32.1 (816)	38.3 (972)
Lift force on frame lb	12905	13085	13735	14250	14480	13985
" " " " " " (kN)	(57.4)	(58.2)	(61.1)	(63.4)	(64.4)	(62.2)

### HITCH DIMENSIONS AS TESTED - NO LOAD

	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	30.6	776	31.2	793
B	14.0	355	14.0	355
C	13.7	348	13.7	348
D	12.0	305	12.0	305
E	8.8	223	12.6	321
F	10.3	261	10.3	261
G	34.5	875	34.5	875
H	2.6	65	2.6	65
I	16.4	416	15.0	380
J	24.2	614	24.2	614
K	25.8	655	25.8	655
L	45.9	1166	45.9	1166
M	26.4	670	26.4	670
N	40.2	1021	40.2	1021
O	9.8	250	8.5	217
P	46.2	1173	51.1	1299
Q	38.3	972	37.8	960
R	29.2	742	29.9	760

