

SUMMARY OF OECD TEST 2516–NEBRASKA SUMMARY 705 MASSEY FERGUSON 5455 DIESEL 16 SPEED

Tractor chassis S/N T022073 and higher

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—1100 rpm)					
92.8 (69.2)	2199	6.00 (22.71)	0.461 (0.280)	15.45 (3.04)	
Standard Power Take-off Speed(1000 rpm)					
109.3 (81.5)	2000	6.46 (24.46)	0.421 (0.256)	16.91 (3.33)	
Maximum Power (1 hour)					
109.3 (81.5)	2000	6.46 (24.46)	0.421 (0.256)	16.91 (3.33)	

VARYING POWER AND FUEL CONSUMPTION

92.8 (69.2)	2199	6.00 (22.71)	0.461 (0.280)	15.45 (3.04)	Air temperature
79.1 (59.0)	2202	5.26 (19.91)	0.473 (0.288)	15.04 (2.96)	70°F (21°C)
59.5 (44.4)	2213	4.45 (16.84)	0.532 (0.324)	13.37 (2.63)	Relative humidity
40.0 (29.8)	2227	3.39 (12.82)	0.603 (0.367)	11.81 (2.33)	38%
20.1 (15.0)	2240	2.27 (8.61)	0.803 (0.489)	8.86 (1.75)	Barometer
--	2250	1.35 (5.10)	--	--	29.7" Hg (100.7 kPa)

Maximum torque - 355.7 lb.-ft. (482.3 Nm) at 1401 rpm

Maximum torque rise - 60.4%

Torque rise at 1750 engine rpm - 45%

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 lb/hp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—7th(2C) Gear									
67.7 (50.5)	5530 (24.6)	4.59 (7.39)	2193	4.9	0.550 (0.335)	12.89 (2.54)	181 (83)	45 (7)	30.1 (102.0)
75% of Pull at Maximum Power—7th(2C) Gear									
52.2 (38.9)	4170 (18.5)	4.69 (7.55)	2205	3.5	0.605 (0.368)	11.73 (2.31)	180 (82)	45 (7)	30.1 (102.0)
50% of Pull at Maximum Power—7th(2C) Gear									
35.4 (26.4)	2775 (12.3)	4.78 (7.69)	2219	2.3	0.702 (0.427)	10.10 (1.99)	180 (82)	45 (7)	30.1 (102.0)
75% of Pull at Reduced Engine Speed—8th(2D) Gear									
51.9 (38.7)	4180 (18.6)	4.66 (7.51)	1779	3.2	0.523 (0.318)	13.55 (2.67)	178 (81)	45 (7)	30.1 (102.0)
50% of Pull at Reduced Engine Speed—8th(2D) Gear									
35.1 (26.2)	2765 (12.3)	4.77 (7.67)	1794	1.9	0.583 (0.355)	12.17 (2.40)	174 (79)	45 (7)	30.1 (102.0)

Location of tests: Groupement d'Antony, Parc de Touvoie, BP 44 Antony, Cedex, France 92163
Dates of tests: December 2008 to March, 2009

Manufacturer: AGCOS.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 fluid **Front axle lubricant** API GL5 - SAE 85W140

ENGINE: Make Perkins Diesel **Type** four cylinder vertical with turbocharger and air to air intercooler
Serial No. U021737S **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.134" x 5.000" (105.0 mm x 127.0 mm) **Compression ratio** 16.2 to 1 **Displacement** 268 cu in (4400 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.** T239091 **Tread width** rear 59.8" (1518 mm) to 67.0" (1703 mm) front 55.7" (1415 mm) to 64.8" (1646 mm) **Wheelbase** 97.0" (2464 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (4) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.32 (2.12) second 1.62 (2.60) third 1.97 (3.17) fourth 2.43 (3.91) fifth 3.11 (5.01) sixth 3.83 (6.17) seventh 4.68 (7.53) eighth 5.75 (9.26) ninth 6.33 (10.19) tenth 7.79 (12.53) eleventh 9.50 (15.29) twelfth 11.68 (18.80) thirteenth 13.54 (21.79) fourteenth 16.65 (26.80) fifteenth 20.31 (32.69) sixteenth 24.99 (40.21) reverse 1.32 (2.12), 1.62 (2.60), 1.97 (3.17), 2.43 (3.91), 3.11 (5.01), 3.83 (6.17), 4.68 (7.53), 5.75 (9.26), 6.33 (10.19), 7.79 (12.53), 9.50 (15.29), 11.68 (18.80), 13.54 (21.79), 16.65 (26.80), 20.31 (32.69), 24.99 (40.21) **Clutch** multiple wet disc operated by foot pedal **Brakes** multiple wet disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1980 engine rpm or 1000 rpm at 2000 engine rpm **Unladen tractor mass** 9720 lb (4410 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 lb/hp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
4th(1D)Gear									
52.3 (39.0)	9285 (41.3)	2.11 (3.40)	2193	15.0	0.662 (0.403)	10.71 (2.11)	176 (80)	43 (6)	30.1 (102.0)
5th(2A)Gear									
66.4 (49.5)	9060 (40.3)	2.75 (4.42)	2166	13.6	0.580 (0.353)	12.23 (2.41)	178 (81)	43 (6)	30.1 (102.0)
6th(2B)Gear									
75.5 (56.3)	8475 (37.7)	3.34 (5.37)	2039	9.2	0.535 (0.326)	13.25 (2.61)	180 (82)	43 (6)	30.1 (102.0)
7th(2C)Gear									
80.6 (60.1)	7350 (32.7)	4.11 (6.61)	2006	7.1	0.510 (0.310)	13.91 (2.74)	178 (81)	43 (6)	30.1 (102.0)
8th(2D)Gear									
81.0 (60.4)	5910 (26.3)	5.14 (8.27)	2000	4.7	0.504 (0.307)	14.06 (2.77)	178 (81)	45 (7)	30.1 (102.0)
9th(3A)Gear									
92.5 (69.0)	6135 (27.3)	5.65 (9.09)	2002	5.1	0.477 (0.290)	14.87 (2.93)	181 (83)	45 (7)	30.1 (102.0)
10th(3B) Gear									
92.4 (68.9)	4915 (21.9)	7.05 (11.34)	2002	4.2	0.474 (0.288)	14.97 (2.95)	176 (80)	46 (8)	30.1 (102.0)
*11th(3C)Gear									
91.9 (68.5)	4095 (18.2)	8.41 (13.54)	2003	4.8	0.477 (0.290)	14.87 (2.93)	172 (78)	46 (8)	30.1 (102.0)

*Front Drive Disengaged

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

NOTE 1: The engine on this tractor is electronically controlled to give 2 power levels. A "boosted" level is available when the PTO is engaged, tractor stationary, and when the tractor is operated in ranges 3 and 4.

NOTE 2: The performance figures on this report are the result of replacing the electronic engine control module of the Massey Ferguson 5445 with the Massey Ferguson 5455 module.

NOTE 3: The performance figures on this report apply to tractors with chassis S/N T022073 and higher.

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 claim of 26 GPM (100 lpm) hydraulic flow at the remote outlets. 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. **2516**, Nebraska Summary 705, September 8, 2010.

Roger M. Hoy
 Director

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 Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 7th (2C) gear	75.0	75.0
Bystander	--	--

TRACTOR SOUND LEVEL WITHOUT CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 7th (2C) gear	85.0	85.0
Bystander	--	--

TIRES 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 18.4R38; **,15(100)
 Two 14.9R28; **,15(100)
 19.7 in (500 mm)
 6065 lb (2750 kg)
 3845 lb (1745 kg)
 9910 lb (4495 kg)

DRAWBAR PERFORMANCE
(Unballasted - Front Drive Disengaged)
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.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
5th(2A) Gear									
53.4 (39.8)	7315 (32.5)	2.74 (4.40)	2196	14.8	0.636 (0.387)	11.16 (2.20)	171 (77)	39 (4)	30.1 (102.0)
6th(2B) Gear									
65.7 (49.0)	7080 (31.5)	3.48 (5.60)	2175	10.7	0.605 (0.368)	11.73 (2.31)	176 (80)	39 (4)	30.1 (102.0)
7th(2C) Gear									
74.3 (55.4)	6845 (30.5)	4.07 (6.55)	2047	9.4	0.561 (0.341)	12.64 (2.49)	176 (80)	39 (4)	30.1 (102.0)
8th(2D) Gear									
77.6 (57.9)	5830 (25.9)	4.99 (8.03)	1999	7.2	0.535 (0.325)	13.26 (2.61)	174 (79)	41 (5)	30.1 (102.0)
9th(3A) Gear									
89.6 (66.8)	6105 (27.2)	5.50 (8.86)	2004	7.6	0.504 (0.307)	14.06 (2.77)	176 (80)	41 (5)	30.1 (102.0)
10th(3B) Gear									
89.7 (66.9)	4910 (21.8)	6.85 (11.03)	1999	6.2	0.502 (0.305)	14.13 (2.78)	176 (80)	41 (5)	30.1 (102.0)
11th(3C) Gear									
89.6 (66.8)	3985 (17.7)	8.43 (13.57)	2002	6.1	0.496 (0.302)	14.30 (2.82)	180 (82)	41 (5)	30.1 (102.0)

TIRES 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 18.4R38; **,15(100)

Two 14.9R28; **,15(100)

31.5 in (800 mm)

6065 lb (2750 kg)

3845 lb (1745 kg)

9910 lb (4495 kg)

HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

Maximum force exerted through whole range: 7817 lbs (34.8 kN) (66 mm lift cylinders)

9189 lbs (40.9 kN) (75 mm lift cylinders)

Open center system

100 l/min pump 57 l/min pump

Closed center system

110 l/min pump

i) Sustained pressure of the open relief valve: 3136 psi (216 bar) 2785 psi (192 bar) 2848 psi (196 bar)

ii) Pump delivery rate at minimum pressure: 24.1 GPM (91.2 l/min) 16.1 GPM (61.0 l/min) 29.8 GPM (112.7 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 22.4 GPM (84.8 l/min) 14.7 GPM (55.5 l/min) 24.2 GPM (91.6 l/min)

Delivery pressure: 2338 psi (161 bar) 2580 psi (178 bar) 2708 psi (187 bar)

Power: 30.6 HP (22.8 kW) 22.1 Hp (16.4 kW) 38.2 hp (28.5 kW)

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar)	2770 (191)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C)	152 (67)
Location:	hydraulic valve
Category:	II
Quick attach:	none

66 mm cylinders

SAE Static Test—System pressure 2490 psi (172 Bar)

Hitch point distance to ground level in. (mm)	9.9 (251)	15.0 (381)	22.0 (559)	29.0 (737)	36.0 (914)
Lift force on frame lb	15561	12897	11745	10314	9126
" " " " " " (kN)	(69.2)	(57.4)	(51.0)	(45.9)	(40.6)

75 mm cylinders

SAE Static Test—System pressure 2490 psi (172 Bar)

Hitch point distance to ground level in. (mm)	10.2 (259)	15.0 (381)	22.0 (559)	29.0 (737)	36.0 (914)
Lift force on frame lb	18747	15849	14310	12789	11421
" " " " " " (kN)	(83.4)	(70.5)	(63.7)	(56.9)	(50.8)

HITCH DIMENSIONS AS TESTED—NO LOAD

	SAE test		OECD test	
	inch	mm	inch	mm
A	24.8	629	24.8	629
B	11.6	295	11.6	295
C	13.9	353	13.9	353
D	13.0	330	13.0	330
E	7.9	200	7.9	200
F	10.2	260	10.2	260
G	30.3	770	30.3	770
H	1.4	35	1.4	35
I	16.2	413	16.2	413
J	20.1	510	20.1	510
K	24.2	615	24.2	615
L	41.2	1046	41.2	1046
M	23.5	596	23.5	596
N	37.2	946	37.2	946
O	8.0	203	8.0	203
P	40.2	1020	44.1	1120
Q	33.5	850	33.5	850
R	29.0	737	29.0	737

