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2011

Nebraska Summary: S796 Massey Ferguson 5475

Nebraska Tractor Test Lab

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SUMMARY OF OECD TEST 2627-NEBRASKA SUMMARY 796

MASSEY FERGUSON 5475 DIESEL

16 SPEED

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
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1084 rpm)					
115.7 (86.3)	2200	7.33 (27.73)	0.451 (0.274)	15.79 (3.11)	
Standard Power Take-off Speed(1000 rpm)					
131.2 (97.8)	2030	7.79 (29.48)	0.422 (0.257)	16.85 (3.32)	
Maximum Power (1 hour)					
132.2 (98.6)	2000	7.77 (29.40)	0.418 (0.254)	17.02 (3.35)	

VARYING POWER AND FUEL CONSUMPTION

115.7 (86.3)	2200	7.33 (27.73)	0.451 (0.274)	15.79 (3.11)	Air temperature
98.8 (73.7)	2205	6.64 (25.12)	0.478 (0.291)	14.87 (2.93)	73°F (23°C)
74.4 (55.5)	2217	5.60 (21.19)	0.535 (0.326)	13.29 (2.62)	Relative humidity
49.8 (37.1)	2225	4.51 (17.07)	0.646 (0.393)	11.03 (2.17)	42%
25.1 (18.7)	2234	3.38 (12.78)	0.958 (0.583)	7.43 (1.46)	Barometer
--	2243	2.22 (8.42)	--	--	30.3" Hg (102.6 kPa)

Maximum torque - 450.9 lb.-ft. (611.3 Nm) at 1100 rpm

Maximum torque rise - 63.1%

Torque rise at 1750 engine rpm - 39%

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									
90.9 (67.8)	8385 (37.3)	4.07 (6.55)	2199	7.6	0.548 (0.333)	12.99 (2.56)	181 (83)	61 (16)	30.1 (102.0)
75% of Pull at Maximum Power—7th(2C) Gear									
69.2 (51.6)	6305 (28.1)	4.12 (6.63)	2204	6.5	0.595 (0.362)	11.97 (2.36)	180 (82)	63 (17)	30.1 (102.0)
50% of Pull at Maximum Power—7th(2C) Gear									
47.2 (35.2)	4170 (18.6)	4.24 (6.82)	2220	4.5	0.713 (0.434)	9.98 (1.97)	180 (82)	63 (17)	30.1 (102.0)
75% of Pull at Reduced Engine Speed—8th(2D) Gear									
68.7 (51.2)	6325 (28.1)	4.07 (6.55)	1768	6.1	0.561 (0.341)	12.69 (2.50)	178 (81)	63 (17)	30.1 (102.0)
50% of Pull at Reduced Engine Speed—8th(2D) Gear									
47.3 (35.3)	4145 (18.4)	4.28 (6.89)	1825	4.2	0.624 (0.380)	11.41 (2.25)	178 (81)	63 (17)	30.1 (102.0)

Location of tests: Groupement d'Antony, 1, rue Pierre-Gilles de Gennes, CS 10030 Antony, Cedex, France 92761

Dates of tests: May to June, 2011

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** BPTerrac **Tractan 9 fluid Front axle lubricant** API GL5 - SAE 85W140

ENGINE: Make Sisu Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** X08529 **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.** B108031 **Tread width** rear 66.9" (1700 mm) to 84.4" (2144 mm) front 63.7" (1619 mm) to 85.6" (2174 mm) **Wheelbase** 113.1" (2874 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 1.22 (1.97) second 1.51 (2.43) third 1.84 (2.96) fourth 2.26 (3.64) fifth 2.91 (4.68) sixth 3.58 (5.76) seventh 4.36 (7.02) eighth 5.37 (8.64) ninth 5.91 (9.51) tenth 7.26 (11.69) eleventh 8.86 (14.26) twelfth 10.90 (17.54) thirteenth 13.62 (21.93) fourteenth 16.76 (26.97) fifteenth 20.44 (32.89) sixteenth 25.14 (40.45) reverse 1.22 (1.97), 1.51 (2.43), 1.84 (2.96), 2.26 (3.64), 2.91 (4.68), 3.58 (5.76), 4.36 (7.02), 5.37 (8.64), 5.91 (9.51), 7.26 (11.69), 8.86 (14.26), 10.90 (17.54), 13.63 (21.93), 16.76 (26.97), 20.44 (32.89), 25.14 (40.45) **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 1976 engine rpm or 1000 rpm at 2030 engine rpm **Unladen tractor mass** 12565 lb (5700 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. °F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
63.7 (47.5)	11715 (52.1)	2.04 (3.28)	2208	13.0	0.641 (0.390)	11.11 (2.19)	180 (82)	61 (16)	30.1 (102.0)
81.8 (61.0)	11670 (51.9)	2.63 (4.23)	2201	11.1	0.568 (0.345)	12.54 (2.47)	180 (82)	61 (16)	30.1 (102.0)
93.7 (69.9)	11080 (49.3)	3.17 (5.11)	2143	8.8	0.544 (0.331)	13.10 (2.58)	180 (82)	61 (16)	30.1 (102.0)
99.5 (74.2)	9710 (43.2)	3.84 (6.18)	2068	7.0	0.525 (0.319)	13.55 (2.67)	180 (82)	61 (16)	30.1 (102.0)
99.9 (74.5)	8185 (36.4)	4.58 (7.37)	2002	6.6	0.525 (0.319)	13.55 (2.67)	181 (83)	63 (17)	30.1 (102.0)
114.7 (85.5)	8050 (35.8)	5.34 (8.60)	2009	4.8	0.487 (0.296)	14.62 (2.88)	181 (83)	63 (17)	30.1 (102.0)
113.0 (84.3)	6405 (28.5)	6.62 (10.65)	2002	3.2	0.487 (0.296)	14.62 (2.88)	181 (83)	63 (17)	30.1 (102.0)
111.2 (82.9)	5195 (23.1)	8.03 (12.92)	1991	3.0	0.497 (0.302)	14.31 (2.82)	183 (84)	64 (18)	30.1 (102.0)
106.6 (79.5)	4090 (18.2)	9.77 (15.72)	2004	4.0	0.514 (0.312)	13.86 (2.73)	183 (84)	64 (18)	30.1 (102.0)

*Front Drive Disengaged

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 7th (2C) gear	74.0	74.0
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 460/85R38; **,15(100)
Two 380/85R28; **,15(100)
19.7 in (500 mm)
7200 lb (3265 kg)
5530 lb (2510 kg)
12730 lb (5775 kg)

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 apply to tractors equipped with a Sisu engine.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The manufacturer's remote hydraulic flow claim of 26 GPM (100 lpm) was not verified. 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. **2627**, Nebraska Summary 796, November 21, 2011.

Roger M. Hoy
Director

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

HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

Maximum force exerted through whole range: 9189 lbs (40.9 kN) (75 mm lift cylinders)

two outlet sets combined

	57 l/min pump	110 l/min pump
i) Sustained pressure of the open relief valve:	2830 psi (195 bar)	2755 psi (190 bar)
ii) Pump delivery rate at minimum pressure:	15.8 GPM (59.8 l/min)	30.0 GPM (113.4 l/min)
iii) Pump delivery rate at maximum		
hydraulic power:	14.7 GPM (55.6 l/min)	26.0 GPM (98.5 l/min)
Delivery pressure:	2425 psi (167 bar)	2220 psi (153 bar)
Power:	20.8 Hp (15.5 kW)	33.7 hp (25.1 kW)

single outlet set

ii) Pump delivery rate at minimum pressure:	15.6 GPM (58.9 l/min)	29.6 GPM (112.2 l/min)
iii) Pump delivery rate at maximum		
hydraulic power:	14.6 GPM (55.3 l/min)	25.7 GPM (97.4 l/min)
Delivery pressure:	2395 psi (165 bar)	1915 psi (132 bar)
Power:	20.4 Hp (15.2 kW)	28.7 hp (21.4 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

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

