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2015

Nebraska Summary: S993A Massey Ferguson 8737

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SUMMARY OF OECD TEST 2910-NEBRASKA SUMMARY 993A

MASSEY FERGUSON 8737 DIESEL

ALSO MASSEY FERGUSON 8737S DIESEL

DYNA VT TRANSMISSION

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Diesel Consumption		D.E.F. Consumption		Mean Atmospheric Conditions
		Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Gal/hr (l/h)	
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1065 rpm)						
304.8 (227.3)	2097	17.44 (66.02)	0.399 (0.243)	17.48 (3.44)	0.82 (3.10)	
Standard Power Take-off Speed (1000 rpm)						
314.7 (234.7)	1970	17.54 (66.38)	0.388 (0.236)	17.95 (3.54)	0.83 (3.15)	
Maximum Power (1 hour)						
326.4 (243.4)	1952	17.53 (66.34)	0.375 (0.228)	18.62 (3.67)	0.76 (2.88)	

VARYING POWER AND FUEL CONSUMPTION

304.8 (227.3)	2097	17.44 (66.02)	0.399 (0.243)	17.48 (3.44)	0.82 (3.10)	Air temperature
261.2 (194.8)	2115	14.93 (56.52)	0.399 (0.243)	17.49 (3.45)	0.61 (2.30)	72°F (22°C)
197.0 (146.9)	2127	11.95 (45.25)	0.423 (0.258)	16.48 (3.25)	0.54 (2.04)	Relative humidity
131.9 (98.4)	2137	9.08 (34.39)	0.481 (0.292)	14.52 (2.86)	0.29 (1.11)	52%
66.2 (49.4)	2146	5.73 (21.70)	0.603 (0.367)	11.56 (2.28)	0.10 (0.67)	Barometer
---	2155	2.91 (11.02)	---	---	---	30.4" Hg (103.0 kPa)

Maximum torque - 1050 lb.-ft. (1424 Nm) at 1304 rpm

Maximum torque rise - 37.7%

Torque rise at 1690 engine rpm - 28%

Power increase at 1952 engine rpm - 7.1%

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)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Power at Rated Engine Speed—Rabbit 11									
249.8 (186.3)	15065 (67.0)	6.22 (10.01)	2100	6.4	0.476 (0.289)	14.53 (2.86)	194 (90)	52 (11)	30.5 (103.2)
75% of Pull at Rated Engine Speed—Rabbit 11									
189.2 (141.1)	11285 (50.2)	6.29 (10.12)	2127	5.0	0.512 (0.312)	13.49 (2.66)	189 (87)	54 (12)	30.5 (103.2)
50% of Pull at Rated Engine Speed—Rabbit 11									
130.9 (97.6)	7555 (33.6)	6.50 (10.46)	2134	2.1	0.579 (0.352)	11.93 (2.35)	189 (87)	54 (12)	30.5 (103.2)
75% of Pull at Reduced Engine Speed—Rabbit 14									
189.6 (141.4)	11285 (50.2)	6.30 (10.14)	1594	3.4	0.445 (0.271)	15.53 (3.06)	190 (88)	55 (13)	30.5 (103.2)
50% of Pull at Reduced Engine Speed—Rabbit 14									
129.4 (96.5)	7485 (33.3)	6.48 (10.43)	1599	1.5	0.479 (0.292)	14.42 (2.84)	189 (87)	55 (13)	30.5 (103.2)

Location of tests: IRSTEA, Centre d'Antony, 1 rue Pierre-Gilles de Gennes CS 10030 Antony, 92163, Cedex, France

Dates of tests: January to April, 2015.

Manufacturer: AGCOS.A.S, 41 Avenue Blaise Pascal, 60000 Beauvais, France

CONSUMABLE FLUIDS: Fuel No. 2 Diesel Specific gravity converted to 60°/60°F (15°/15°C) 0.837 Fuel weight 6.98 lbs/gal (0.836 kg/l) Diesel Exhaust Fluid (DEF) 32% aqueous urea solution DEF weight 9.08 lbs/gal (1.091 kg/l) Oil SAE 15W40 API service classification CJ-4 Transmission and hydraulic lubricant Terrac Trantan 910W/40 Front axle lubricant SAE 85W90 API GL4

ENGINE: Make AGCO Power Diesel Type six cylinder vertical with two turbochargers, air to air intercooler and D.E.F. (diesel exhaust fluid) technology Serial No. 84AWF 944 T06951 Crankshaft lengthwise Rated engine speed 2100 Bore and stroke 4.370" x 5.709" (111.0 mm x 145.0 mm) Compression ratio 16.7 to 1 Displacement 513 cu in (8419 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 vertical Cooling medium temperature control thermostat and variable speed fan

CHASSIS: Type front wheel assist Serial No. D035901 Tread width rear 76.0" (1930 mm) to 89.1" (2262 mm) front 61.5" (1560 mm) to 89.4" (2268 mm) Wheelbase 121.8" (3093 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 0-20 (0-32), high range 0-25 (0-40) reverse: Low range 0-12 (0-20), high range 0-18 (0-30) 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 1000 rpm at 1970 engine rpm Unladen tractor mass 24670 lb (11190 kg)

DRAWBAR PERFORMANCE
(Unballasted - Front Drive Engaged)
MAXIMUM POWER AT SELECTED TRAVEL SPEEDS

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.lhr/gal (kW.h/l)	Temp. ^o F(°C) Air cool- ing med dry bulb	Barom. inch Hg (kPa)	
92.4 (68.9)	21875 (97.3)	1.58 (2.55)	2138	14.7	Turtle 3 0.625 (0.380)	11.07 (2.18)	190 (88)	50 (10)	30.4 (102.8)
155.2 (115.7)	21110 (93.9)	2.77 (4.45)	2130	10.5	Turtle 5 0.540 (0.329)	12.79 (2.52)	190 (88)	50 (10)	30.4 (102.8)
193.1 (144.0)	20480 (91.1)	3.54 (5.69)	2120	9.4	Turtle 6.5 0.532 (0.324)	12.98 (2.56)	187 (86)	52 (11)	30.4 (103.0)
265.7 (198.1)	20345 (90.5)	4.90 (7.88)	1969	7.8	Turtle 8 0.455 (0.277)	15.18 (2.99)	192 (89)	54 (12)	30.5 (103.2)
269.8 (201.2)	15670 (69.7)	6.46 (10.39)	1942	4.9	Turtle 11 0.445 (0.271)	15.53 (3.06)	192 (90)	54 (12)	30.5 (103.2)
260.6 (194.3)	11800 (52.5)	8.28 (13.32)	1945	3.2	Turtle 14 0.465 (0.283)	14.87 (2.93)	196 (91)	54 (12)	30.5 (103.2)
257.5 (192.0)	10185 (45.3)	9.48 (15.26)	1948	2.6	*Turtle 16 0.478 (0.291)	14.47 (2.85)	199 (93)	54 (12)	30.5 (103.2)
251.7 (187.7)	8590 (38.2)	10.99 (17.69)	1956	2.5	*Turtle 18 0.504 (0.306)	13.72 (2.70)	199 (93)	54 (12)	30.5 (103.2)
244.1 (182.0)	18885 (84.0)	4.85 (7.80)	1947	7.0	Rabbit 8.5 0.498 (0.303)	13.88 (2.74)	189 (87)	54 (12)	30.5 (103.2)
265.8 (198.2)	15960 (71.0)	6.24 (10.05)	1943	4.8	Rabbit 11 0.455 (0.277)	15.18 (2.99)	187 (86)	54 (12)	30.5 (103.2)
266.6 (198.8)	11890 (52.9)	8.41 (13.53)	1942	3.4	Rabbit 14 0.452 (0.275)	15.28 (3.01)	196 (91)	54 (12)	30.5 (103.2)
269.1 (200.7)	10610 (47.2)	9.51 (15.31)	1955	3.0	*Rabbit 16 0.467 (0.284)	14.78 (2.91)	196 (91)	50 (10)	30.2 (102.4)
266.6 (198.8)	9225 (41.0)	10.84 (17.44)	1950	2.7	*Rabbit 18 0.471 (0.286)	14.68 (2.89)	198 (92)	50 (10)	30.2 (102.4)
255.6 (190.6)	7690 (34.2)	12.47 (20.06)	1923	2.0	*Rabbit 21 0.486 (0.295)	14.23 (2.80)	203 (95)	50 (10)	30.2 (102.4)

* Boosted mode

TRACTOR SOUND LEVEL WITH CAB	dB(A)
At no load in Turtle - 4.9 mph (7.9 km/h) - no load	71.0
Bystander	---

Horizontal distance of drawbar hitch point behind rear wheel axis - 36.8 in (935 mm), 38.8 in (985 mm), 42.7 in, (1085 mm), 48.6 in (1235 mm)

TIRES AND WEIGHT

Rear Tires - No., size, ply & psi(kPa)	Two 710/75R42;***,12(80)
Front Tires - No., size, ply & psi(kPa)	Two 600/65R34;**19(130)
Height of Drawbar	21.7 in (550 mm)
Static Weight with operator - Rear	13615 lb (6175 kg)
- Front	11220 lb (5090 kg)
- Total	24835 lb(11265 kg)

Tested Without Ballast

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: This tractor has an engine control feature that allows the engine to run in a "boosted" mode, increased power level, at travel speeds above 8.7 mph (14.0 km/h).

NOTE 2: The performance figures on this report are the result of replacing the electronic engine control module of the Massey Ferguson 8735 with the Massey Ferguson 8737 module.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor fell 1.9% short of meeting the manufacturer's claim of 54.2 GPM (205 l/min) remote hydraulic flow. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test procedure.

REPORT REISSUED: Supplemental sales permit for Massey Ferguson 8737S Diesel, September, 2018.

We, the undersigned, certify that this is a true summary of data from OECD Report No. 2910, Nebraska Summary 993A, September 12, 2018.

Roger M. Hoy
Director

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

HYDRAULIC PERFORMANCE

CATEGORY: III

Quick Attach: Yes

OECD Static test

Maximum force exerted through whole range: 20390 lbs (90.7 kN) (at 24" (610 mm) behind QA ends)
22460 lbs (99.9 kN) (at QA ends)

i) Sustained pressure at compensator cutoff: 2885 psi (199 bar)
two outlet sets combined

ii) Pump delivery rate at minimum pressure: 53.1 GPM (201.1 l/min)

iii) Pump delivery rate at maximum
hydraulic power: 47.3 GPM (179.2 l/min)
Delivery pressure: 2435 psi (168 bar)
Power: 67.3 HP (50.2 kW)

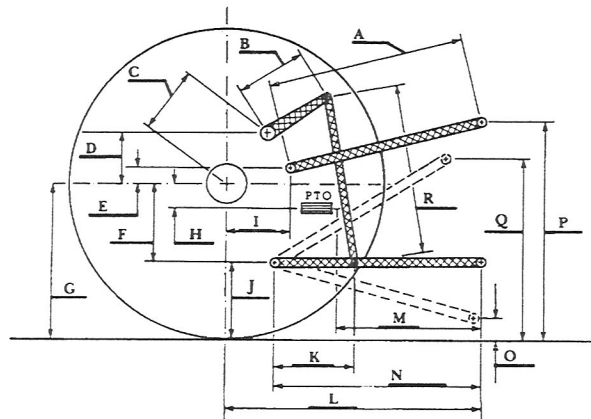
ii) Pump delivery rate at minimum pressure: 35.8 GPM (135.5 l/min)

iii) Pump delivery rate at maximum
hydraulic power: 33.8 GPM (127.9 l/min)
Delivery pressure: 2265 psi (156 bar)
Power: 44.6 HP (33.2 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	31.9	810
B	14.6	370
C	19.1	484
D	15.9	405
E	8.9	225
F	13.0	330
G	40.4	1025
H	2.4	60
I	18.8	478
J	27.4	695
K	24.7	628
L	49.2	1250
*L'	53.9	1370
M	26.8	680
N	39.9	1014
O	10.2	260
P	50.4	1280
Q	38.5	977
R	37.4	950

*L' to Quick Attach ends



RECOMMENDED CITATION FORMAT:

NTTL.(2018). OECD tractor test 2910 for Massey Ferguson 8737S Diesel.

Lincoln, NE:Nebraska Tractor Test Laboratory. Retrieved from <http://tractortestlab.unl.edu>