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2015

Nebraska Summary: S992 Massey Ferguson 8735

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SUMMARY OF OECD TEST 2909–NEBRASKA SUMMARY 992
MASSEY FERGUSON 8735 DIESEL
DYNA VT TRANSMISSION

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Diesel Consumption Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	D.E.F. Consumption Hp.hr/gal *(kW.h/l)*	Gal/hr *(l/h)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION						
Rated Engine Speed—(PTO speed—1064 rpm)						
287.0 *(214.0)*	2096	16.32 *(61.79)*	0.397 *(0.241)*	17.58 *(3.46)*	0.77 *(2.93)*	
Standard Power Take-off Speed (1000 rpm)						
312.3 *(232.9)*	1970	17.13 *(64.83)*	0.383 *(0.233)*	18.23 *(3.59)*	0.73 *(2.78)*	
Maximum Power (1 hour)						
314.3 *(234.4)*	1948	17.01 *(64.39)*	0.378 *(0.230)*	18.48 *(3.64)*	0.82 *(3.12)*	
VARYING POWER AND FUEL CONSUMPTION						
287.0 *(214.0)*	2096	16.32 *(61.79)*	0.397 *(0.241)*	17.58 *(3.46)*	0.77 *(2.93)*	Air temperature
247.4 *(184.5)*	2122	14.38 *(54.45)*	0.405 *(0.247)*	17.21 *(3.39)*	0.62 *(2.34)*	73°F *(23°C)*
185.9 *(138.6)*	2129	11.27 *(42.67)*	0.422 *(0.257)*	16.50 *(3.25)*	0.54 *(2.04)*	Relative humidity
124.6 *(92.9)*	2140	8.62 *(32.64)*	0.483 *(0.294)*	14.45 *(2.85)*	0.36 *(1.35)*	58%
62.5 *(46.6)*	2147	5.73 *(21.69)*	0.639 *(0.389)*	10.91 *(2.15)*	0.29 *(1.11)*	Barometer
---- ----	2153	2.95 *(11.18)*	---- ----	---- ----	---- ----	30.4" Hg *(103.1 kPa)*

Maximum torque - 1016 lb.-ft. *(1378 Nm)* at 1507 rpm
Maximum torque rise - 41.3%
Torque rise at 1700 engine rpm - 35%
Power increase at 1948 engine rpm - 9.5%

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 cool-ing med	*(°C)* Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—Turtle 8									
234.4 *(174.8)*	18185 *(80.9)*	4.83 *(7.78)*	2101	7.8	0.502 *(0.306)*	13.76 *(2.71)*	190 *(88)*	43 *(6)*	30.4 *(103.0)*
75% of Pull at Maximum Power—Turtle 8									
181.4 *(135.3)*	13715 *(61.0)*	4.96 *(7.98)*	2126	4.2	0.519 *(0.316)*	13.30 *(2.62)*	190 *(88)*	43 *(6)*	30.4 *(103.0)*
50% of Pull at Maximum Power—Turtle 8									
126.6 *(94.4)*	9215 *(41.0)*	5.15 *(8.29)*	2129	2.4	0.579 *(0.352)*	11.93 *(2.35)*	189 *(87)*	43 *(6)*	30.4 *(103.0)*
75% of Pull at Reduced Engine Speed—Turtle 11									
179.8 *(134.1)*	13825 *(61.5)*	4.88 *(7.85)*	1592	3.5	0.444 *(0.270)*	15.58 *(3.07)*	187 *(86)*	43 *(6)*	30.4 *(103.0)*
50% of Pull at Reduced Engine Speed—Turtle 11									
126.5 *(94.3)*	9285 *(41.3)*	5.11 *(8.22)*	1604	2.4	0.469 *(0.285)*	14.73 *(2.90)*	185 *(85)*	43 *(6)*	30.4 *(103.0)*

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: AGCO S.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 9 10W/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 1021 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 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.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					Turtle 5				
150.9 *(112.5)*	22255 *(99.0)*	2.54 *(4.09)*	2117	15.3	0.565 *(0.344)*	12.23 *(2.41)*	181 *(83)*	43 *(6)*	30.4 *(102.9)*
					Turtle 6.5				
196.8 *(146.8)*	21715 *(96.6)*	3.40 *(5.47)*	2115	12.0	0.529 *(0.322)*	13.05 *(2.57)*	185 *(85)*	41 *(5)*	30.4 *(102.9)*
					Turtle 8				
254.9 *(190.1)*	20435 *(90.9)*	4.68 *(7.53)*	2033	8.0	0.468 *(0.285)*	14.77 *(2.91)*	187 *(86)*	41 *(5)*	30.4 *(103.0)*
					Turtle 11				
258.1 *(192.5)*	14950 *(66.5)*	6.47 *(10.42)*	1949	4.6	0.459 *(0.279)*	15.08 *(2.97)*	196 *(91)*	41 *(5)*	30.4 *(103.0)*
					Turtle 14				
254.0 *(189.4)*	11260 *(50.1)*	8.46 *(13.61)*	1938	2.7	0.460 *(0.280)*	15.02 *(2.96)*	201 *(94)*	43 *(6)*	30.4 *(102.9)*
					*Turtle 16				
251.0 *(187.2)*	9935 *(44.2)*	9.48 *(15.25)*	1941	2.3	0.479 *(0.292)*	14.42 *(2.84)*	201 *(94)*	43 *(6)*	30.4 *(102.9)*
					*Turtle 18				
244.1 *(182.0)*	8610 *(38.3)*	10.63 *(17.11)*	1932	2.2	0.514 *(0.313)*	13.44 *(2.65)*	201 *(94)*	43 *(6)*	30.4 *(102.9)*
					Rabbit 8.5				
231.2 *(172.4)*	18455 *(82.1)*	4.70 *(7.56)*	1939	6.2	0.507 *(0.308)*	13.62 *(2.68)*	199 *(93)*	43 *(6)*	30.4 *(103.1)*
					Rabbit 11				
253.5 *(189.0)*	15555 *(69.2)*	6.11 *(9.83)*	1958	4.5	0.467 *(0.284)*	14.78 *(2.91)*	192 *(89)*	43 *(6)*	30.4 *(103.0)*
					Rabbit 14				
254.7 *(189.9)*	11600 *(51.6)*	8.23 *(13.25)*	1963	3.2	0.463 *(0.281)*	14.93 *(2.94)*	194 *(90)*	43 *(6)*	30.4 *(103.1)*
					*Rabbit 16				
254.9 *(190.1)*	9935 *(44.2)*	9.62 *(15.48)*	1941	2.6	0.476 *(0.290)*	14.52 *(2.86)*	196 *(91)*	43 *(6)*	30.4 *(103.1)*
					*Rabbit 18				
254.1 *(189.5)*	9195 *(40.9)*	10.36 *(16.68)*	1927	2.3	0.481 *(0.293)*	14.37 *(2.83)*	196 *(91)*	43 *(6)*	30.4 *(103.1)*
					*Rabbit 21				
249.2 *(185.8)*	7375 *(32.8)*	12.67 *(20.39)*	1943	1.8	0.493 *(0.300)*	14.01 *(2.76)*	198 *(92)*	43 *(6)*	30.4 *(103.0)*

* 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	---

TIRES AND WEIGHT — **Tested Without Ballast**

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)*

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 8732 with the Massey Ferguson 8735 module.

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 54 GPM *(205 l/min)* remote flow. 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. **2909,** Nebraska Summary 992, November 23, 2015.

Roger M. Hoy
Director

M.F. Kocher
J.D. Luck
P.J. Jasa
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)*
	single outlet set
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

