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Nebraska Summary: S590 Massey Ferguson 6497

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SUMMARY OF OECD TEST 2389–NEBRASKA SUMMARY 590
MASSEY FERGUSON 6497 DIESEL
24 SPEED

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)					
182.4 *(136.0)*	2200	11.27 *(42.65)*	0.441 *(0.268)*	16.18 *(3.19)*	
Standard Power Take-off Speed(1000 rpm)					
208.9 *(155.8)*	2000	12.10 *(45.81)*	0.413 *(0.251)*	17.26 *(3.40)*	
Maximum Power (1 hour)					
208.9 *(155.8)*	2000	12.10 *(45.81)*	0.413 *(0.251)*	17.26 *(3.40)*	
VARYING POWER AND FUEL CONSUMPTION					
182.4 *(136.0)*	2200	11.27 *(42.65)*	0.441 *(0.268)*	16.19 *(3.19)*	Air temperature
155.5 *(115.9)*	2207	9.96 *(37.69)*	0.455 *(0.277)*	15.62 *(3.08)*	73°F *(23°C)*
117.3 *(87.5)*	2221	7.93 *(30.02)*	0.482 *(0.293)*	14.79 *(2.91)*	Relative humidity
78.6 *(58.6)*	2229	5.75 *(21.76)*	0.521 *(0.317)*	13.67 *(2.69)*	36%
39.7 *(29.6)*	2239	3.76 *(14.25)*	0.676 *(0.411)*	10.52 *(2.07)*	Barometer
-- --	2246	2.07 *(7.83)*	-- --	-- --	30.39" Hg *(102.9 kPa)*

Maximum Torque - 633.9 lb.-ft. *(859.4 Nm)* at 1450 rpm
Maximum Torque rise - 45.6%
Torque rise at 1760 engine rpm - 35%

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)*
Maximum Power—15th(3C) Gear									
149.8 *(111.7)*	8025 *(35.7)*	7.00 *(11.27)*	2201	4	0.524 *(0.319)*	13.55 *(2.67)*	189 *(87)*	81 *(27)*	29.7 *(100.6)*
75% of Pull at Maximum Power—15th(3C) Gear									
113.7 *(84.8)*	6015 *(26.8)*	7.09 *(11.41)*	2207	3	0.579 *(0.352)*	12.28 *(2.42)*	192 *(89)*	81 *(27)*	29.7 *(100.5)*
50% of Pull at Maximum Power—15th(3C) Gear									
77.5 *(57.8)*	4025 *(17.9)*	7.22 *(11.62)*	2225	2	0.635 *(0.386)*	11.19 *(2.20)*	185 *(85)*	81 *(27)*	29.7 *(100.5)*
75% of Pull at Reduced Engine Speed—16th(3D) Gear									
113.7 *(84.8)*	6005 *(26.7)*	7.10 *(11.42)*	1852	3	0.494 *(0.300)*	14.38 *(2.83)*	187 *(86)*	81 *(27)*	29.7 *(100.5)*
50% of Pull at Reduced Engine Speed—16h(3D) Gear									
77.1 *(57.5)*	4030 *(17.9)*	7.17 *(11.54)*	1845	2	0.550 *(0.334)*	12.92 *(2.54)*	181 *(83)*	81 *(27)*	29.7 *(100.5)*

Location of tests: Groupement d'Antony, Parc de Touvoie, BP 44 Antony, France 92163
Dates of tests: April - May, 2007

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** Terrac Tractan 9 10W/40

ENGINE: Make Sisu Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** T04242 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.252" x 5.276" *(108.0 mm x 134.0 mm)* **Compression ratio** 17.5 to 1 **Displacement** 449 cu in *(7365 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.** S066022 **Tread width** rear 61.7" *(1567 mm)* to 95.2" *(2417 mm)* front 68.8" *(1747 mm)* to 75.4" *(1915 mm)* **Wheelbase** 118.0" (*2996 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (6) range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 0.99 *(1.59)* second 1.19 *(1.91)* third 1.39 *(2.24)* fourth 1.68 *(2.70)* fifth 1.97 *(3.17)* sixth 2.37 *(3.82)* seventh 2.67 *(4.29)* eighth 3.21 *(5.16)* ninth 3.77 *(6.06)* tenth 4.53 *(7.29)* eleventh 5.11 *(8.22)* twelfth 5.33 *(8.57)* thirteenth 6.14 *(9.88)* fourteenth 6.41 *(10.31)* fifteenth 7.21 *(11.60)* sixteenth 8.67 *(13.96)* seventeenth 10.20 *(16.41)* eighteenth 11.60 *(18.66)* nineteenth 12.27 *(19.75)* twentieth 13.94 *(22.44)* twenty-first 16.36 *(26.33)* twenty-second 19.69 *(31.69)* twenty-third 23.16 *(37.27)* twenty-fourth 27.86 *(44.84)* reverse 0.99 *(1.59)*, 1.19 *(1.91)*, 1.39 *(2.24)*, 1.68 *(2.70)*, 1.97 *(3.17)*, 2.37 *(3.82)*, 2.67 *(4.29)*, 3.21 *(5.16)*, 3.77 *(6.06)*, 4.53 *(7.29)*, 5.11 *(8.22)*, 5.33 *(8.57)*, 6.14 *(9.88)*, 6.41 *(10.31)*, 7.21 *(11.60)*, 8.67 *(13.96)*, 10.20 *(16.41)*, 11.60 *(18.66)*, 12.27 *(19.75)*, 13.94 *(22.44)*, 16.36 *(26.33)*, 19.69 *(31.69)*, 23.16 *(37.27)*, 27.86 *(44.84)*

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)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Temp.°F*(°C)* Air dry bulb	Barom. inch Hg *(kPa)*
					3rd(1C) Gear				
48.3 *(36.0)*	15085 *(67.1)*	1.20 *(1.93)*	2224	15	0.804 *(0.489)*	8.83 *(1.74)*	180 *(82)*	72 *(22)*	29.7 *(100.6)*
					4th(1D) Gear				
57.3 *(42.7)*	14905 *(66.3)*	1.44 *(2.32)*	2216	14	0.767 *(0.466)*	9.26 *(1.82)*	180 *(82)*	72 *(22)*	29.7 *(100.6)*
					5th(1E) Gear				
65.8 *(49.1)*	14275 *(63.5)*	1.73 *(2.79)*	2213	13	0.720 *(0.438)*	9.86 *(1.94)*	181 *(83)*	72 *(22)*	29.7 *(100.6)*
					6th(1F) Gear				
78.9 *(58.8)*	14005 *(62.3)*	2.11 *(3.40)*	2210	11	0.679 *(0.413)*	10.46 *(2.06)*	185 *(85)*	72 *(22)*	29.7 *(100.6)*
					7th(2A) Gear				
89.0 *(66.4)*	13960 *(62.1)*	2.39 *(3.85)*	2206	11	0.669 *(0.407)*	10.61 *(2.09)*	180 *(82)*	72 *(22)*	29.7 *(100.6)*
					8th(2B) Gear				
106.9 *(79.7)*	13780 *(61.3)*	2.91 *(4.68)*	2202	10	0.627 *(0.382)*	11.32 *(2.23)*	185 *(85)*	72 *(22)*	29.7 *(100.6)*
					9th(2C) Gear				
124.6 *(92.9)*	13715 *(61.0)*	3.41 *(5.48)*	2195	9	0.608 *(0.370)*	11.67 *(2.30)*	185 *(85)*	72 *(22)*	29.7 *(100.6)*
					10th(2D) Gear				
139.1 *(103.7)*	12320 *(54.8)*	4.23 *(6.81)*	2189	7	0.575 *(0.349)*	12.36 *(2.43)*	192 *(89)*	73 *(23)*	29.7 *(100.6)*
					11th(3A) Gear				
158.5 *(118.2)*	12760 *(56.8)*	4.66 *(7.50)*	2164	8	0.524 *(0.319)*	13.55 *(2.67)*	187 *(86)*	73 *(23)*	29.7 *(100.6)*
					12th(2E) Gear				
158.5 *(118.2)*	12655 *(56.3)*	4.70 *(7.56)*	2081	7	0.511 *(0.311)*	13.91 *(2.74)*	185 *(85)*	73 *(23)*	29.7 *(100.7)*
					13th(3B) Gear				
173.9 *(129.7)*	12110 *(53.9)*	5.39 *(8.67)*	2052	6	0.507 *(0.308)*	14.01 *(2.76)*	190 *(88)*	81 *(27)*	29.7 *(100.6)*
					14th(2F) Gear				
160.3 *(119.5)*	10865 *(48.3)*	5.53 *(8.90)*	2005	5	0.536 *(0.326)*	13.25 *(2.61)*	194 *(90)*	81 *(27)*	29.7 *(100.6)*
					15th(3C) Gear				
180.2 *(134.4)*	10925 *(48.6)*	6.19 *(9.96)*	1999	5	0.487 *(0.297)*	14.57 *(2.87)*	185 *(85)*	79 *(26)*	29.7 *(100.6)*
					16th(3D) Gear				
178.4 *(133.0)*	8800 *(39.1)*	7.60 *(12.23)*	2001	4	0.496 *(0.302)*	14.31 *(2.82)*	196 *(91)*	79 *(26)*	29.7 *(100.6)*
					*17th(3E) Gear				
176.3 *(131.5)*	7640 *(34.0)*	8.65 *(13.93)*	2003	7	0.500 *(0.304)*	14.21 *(2.80)*	196 *(91)*	81 *(27)*	29.7 *(100.6)*

* Front Drive disengaged

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 1998 engine rpm or 1000 rpm at 2000 engine rpm **Unladen tractor mass** 17460 lb *(7920 kg)*

NOTE 1: The performance figures on this report are the result of replacing the electronic engine control module of the Massey Ferguson 6499 with the Massey Ferguson 6497 module.

NOTE 2: 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.

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

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 II test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2389,** Nebraska Summary 590, March 9, 2009.

Roger M. Hoy
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers

TIRES, BALLAST AND WEIGHT	**With Ballast**	**Without Ballast**
Rear tires - No.,size, ply & psi*(kPa)*	Four 480/80R46; ***;16*(110)*	Two 520/85R42;**;15*(100)*
Ballast - Duals(total)	2190 lb *(993 kg)*	None
- Cast iron(total)	1875 lb *(850 kg)*	None
Front tires - No.,size, ply & psi*(kPa)*	Two 16.9R30; **;16*(110)*	Two 16.9R30;**;15*(100)*
Ballast - Liquid(total)	None	None
- Cast Iron(total)	1795 lb *(815 kg)*	None
Height of Drawbar	22.5 in *(570 mm)*	22.5 in *(570 mm)*
Static Weight with operator- Rear	15070 lb *(6835 kg)*	10670 lb *(4840 kg)*
- Front	8850 lb *(4015 kg)*	6965 lb *(3160 kg)*
- Total	23920 lb *(10850 kg)*	17635 lb *(8000 kg)*

DRAWBAR PERFORMANCE

(Ballasted - 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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					5th(1E) Gear				
92.0 *(68.6)*	19740 *(87.8)*	1.75 *(2.81)*	2212	15	0.642 *(0.390)*	11.07 *(2.18)*	176 *(80)*	61 *(16)*	29.7 *(100.6)*
					6th(1F) Gear				
111.7 *(83.3)*	19290 *(85.8)*	2.17 *(3.50)*	2212	12	0.597 *(0.363)*	11.89 *(2.34)*	181 *(83)*	61 *(16)*	29.7 *(100.6)*
					7th(2A) Gear				
123.4 *(92.0)*	19085 *(84.9)*	2.42 *(3.90)*	2201	12	0.583 *(0.354)*	12.19 *(2.40)*	183 *(84)*	61 *(16)*	29.7 *(100.6)*
					8th(2B) Gear				
148.5 *(110.7)*	18840 *(83.8)*	2.96 *(4.76)*	2199	11	0.524 *(0.319)*	13.55 *(2.67)*	187 *(86)*	61 *(16)*	29.7 *(100.6)*
					9th(2C) Gear				
161.3 *(120.3)*	18705 *(83.2)*	3.23 *(5.20)*	2039	10	0.503 *(0.306)*	14.11 *(2.78)*	183 *(84)*	63 *(17)*	29.7 *(100.6)*
					10th(2D) Gear				
169.6 *(126.5)*	15670 *(69.7)*	4.06 *(6.53)*	2028	6	0.476 *(0.289)*	14.92 *(2.94)*	174 *(79)*	63 *(17)*	29.7 *(100.6)*
					11th(3A) Gear				
181.0 *(135.0)*	14905 *(66.3)*	4.55 *(7.33)*	2016	6	0.491 *(0.298)*	14.48 *(2.85)*	189 *(87)*	63 *(17)*	29.7 *(100.6)*
					12th(2E) Gear				
170.8 *(127.4)*	13400 *(59.6)*	4.78 *(7.69)*	2012	5	0.500 *(0.304)*	14.21 *(2.80)*	190 *(88)*	63 *(17)*	29.7 *(100.6)*
					13th(3B) Gear				
182.5 *(136.1)*	12530 *(55.7)*	5.46 *(8.79)*	2000	5	0.484 *(0.294)*	14.67 *(2.89)*	192 *(89)*	63 *(17)*	29.7 *(100.6)*
					14th(2F) Gear				
169.0 *(126.0)*	10995 *(48.9)*	5.76 *(9.27)*	2006	5	0.512 *(0.312)*	13.86 *(2.73)*	189 *(87)*	64 *(18)*	29.7 *(100.6)*
					15th(3C) Gear				
186.7 *(139.2)*	10790 *(48.0)*	6.49 *(10.44)*	2005	5	0.476 *(0.289)*	14.92 *(2.94)*	192 *(89)*	64 *(18)*	29.7 *(100.6)*
					16th(3D) Gear				
184.8 *(137.8)*	8870 *(39.5)*	7.81 *(12.57)*	1999	5	0.479 *(0.291)*	14.82 *(2.92)*	194 *(90)*	64 *(18)*	29.7 *(100.6)*
					*17th(3E) Gear				
175.9 *(131.2)*	7185 *(32.0)*	9.18 *(14.78)*	2001	5	0.501 *(0.305)*	14.16 *(2.79)*	190 *(88)*	64 *(18)*	29.7 *(100.5)*

* Front Drive disengaged

TRACTOR SOUND LEVEL WITH CAB	dB(A)
At no load in 10th (2D) gear	71.0
Bystander	--

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None

Maximum force exerted through whole range:	14545 lbs *(64.7 kN)*
i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2815 psi *(194 bar)*
ii) Pump delivery rate at minimum pressure:	30.8 GPM *(116.6 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	26.4 GPM *(99.9 l/min)*
Delivery pressure:	2265 psi *(156 bar)*
Power:	34.9 HP *(26.0 kW)*

THREE POINT HITCH PERFORMANCE SAE Test

Observed Maximum Pressure psi. *(bar)*	2815 *(194)*
Location:	lift cylinder
Hydraulic oil temperature: °F *(°C)*	150 *(66)*
Location:	hydraulic sump
Category:	II
Quick attach:	None

SAE Static Test—System pressure 2520 psi *(175 bar)*

Hitch point distance to ground level in. *(mm)*	13.7 *(349)*	18.9 *(480)*	23.6 *(600)*	30.3 *(770)*	36.1 *(918)*	41.2 *(1046)*
Lift force on frame lb	15700	15870	16275	16750	17110	17085
" " " " " " *(kN)*	*(69.8)*	*(70.6)*	*(72.4)*	*(74.5)*	*(76.1)*	*(76.0)*

HITCH DIMENSIONS AS TESTED - NO LOAD

	OECD test		SAE test	
	inch	*mm*	inch	*mm*
A	30.1	*765*	31.3	*795*
B	15.7	*400*	15.7	*400*
C	20.7	*525*	20.7	*525*
D	19.1	*485*	19.1	*485*
E	8.3	*210*	11.6	*295*
F	12.2	*310*	12.2	*310*
G	36.4	*925*	36.4	*925*
H	2.0	*50*	2.0	*50*
I	17.7	*450*	16.9	*430*
J	24.2	*615*	24.2	*615*
K	22.9	*581*	22.9	*581*
L	48.2	*1225*	48.2	*1225*
M	24.6	*625*	24.6	*625*
N	38.1	*967*	38.1	*967*
O	10.7	*272*	13.7	*349*
P	48.2	*1225*	43.2	*1098*
Q	40.6	*1030*	41.2	*1046*
R	36.1	*918*	34.5	*877*

