2007

Nebraska Summary: S598 Massey Ferguson 6499

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SUMMARY OF OECD TEST 2390–NEBRASKA SUMMARY 598
MASSEY FERGUSON 6499 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)					
189.9 *(141.6)*	2200	11.69 *(44.26)*	0.438 *(0.267)*	16.24 *(3.20)*	
Standard Power Take-off Speed(1000 rpm)					
216.2 *(161.2)*	2000	12.40 *(46.95)*	0.408 *(0.248)*	17.43 *(3.43)*	
Maximum Power (1 hour)					
216.2 *(161.2)*	2000	12.40 *(46.95)*	0.408 *(0.248)*	17.43 *(3.43)*	
VARYING POWER AND FUEL CONSUMPTION					
189.9 *(141.6)*	2200	11.69 *(44.26)*	0.438 *(0.267)*	16.24 *(3.20)*	Air temperature
163.1 *(121.6)*	2219	10.20 *(38.59)*	0.445 *(0.271)*	15.99 *(3.15)*	70°F *(21°C)*
122.6 *(91.4)*	2228	8.18 *(30.96)*	0.475 *(0.289)*	14.98 *(2.95)*	Relative humidity
82.6 *(61.6)*	2239	5.98 *(22.65)*	0.516 *(0.314)*	13.81 *(2.72)*	20%
41.3 *(30.8)*	2246	3.86 *(14.61)*	0.665 *(0.405)*	10.70 *(2.11)*	Barometer
-- --	2257	2.07 *(7.82)*	-- --	-- --	30.3" Hg *(102.6 kPa)*

Maximum Torque - 651.8 lb.-ft. *(883.8 Nm)* at 1450 rpm
Maximum Torque rise - 43.8%
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									
167.0 *(124.5)*	9035 *(40.2)*	6.93 *(11.16)*	2199	4	0.501 *(0.305)*	14.16 *(2.79)*	189 *(87)*	64 *(18)*	29.8 *(100.9)*
75% of Pull at Maximum Power—15th(3C) Gear									
127.8 *(95.3)*	6790 *(30.2)*	7.06 *(11.37)*	2209	3	0.544 *(0.331)*	13.05 *(2.57)*	190 *(88)*	66 *(19)*	29.8 *(100.9)*
50% of Pull at Maximum Power—15th(3C) Gear									
86.4 *(64.4)*	4520 *(20.1)*	7.17 *(11.53)*	2221	2	0.610 *(0.371)*	11.62 *(2.29)*	179 *(82)*	66 *(19)*	29.8 *(100.9)*
75% of Pull at Reduced Engine Speed—16th(3D) Gear									
127.9 *(95.4)*	6785 *(30.2)*	7.07 *(11.38)*	1834	3	0.477 *(0.290)*	14.87 *(2.93)*	183 *(84)*	66 *(19)*	29.8 *(100.9)*
50% of Pull at Reduced Engine Speed—16th(3D) Gear									
86.2 *(64.3)*	4520 *(20.1)*	7.15 *(11.50)*	1845	2	0.531 *(0.323)*	13.35 *(2.63)*	180 *(82)*	66 *(19)*	29.8 *(100.9)*

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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					6th(1F) Gear				
80.7 *(60.2)*	14905 *(66.3)*	2.03 *(3.27)*	2220	15	0.681 *(0.414)*	10.41 *(2.05)*	181 *(83)*	57 *(14)*	29.8 *(100.9)*
					7th(2A) Gear				
94.4 *(70.4)*	14365 *(63.9)*	2.46 *(3.97)*	2226	9	0.591 *(0.359)*	12.00 *(2.36)*	180 *(82)*	59 *(15)*	29.8 *(100.9)*
					8th(2B) Gear				
111.3 *(83.0)*	14185 *(63.1)*	2.94 *(4.73)*	2213	9	0.582 *(0.354)*	12.18 *(2.40)*	183 *(84)*	59 *(15)*	29.8 *(100.9)*
					9th(2C) Gear				
130.9 *(97.6)*	14410 *(64.1)*	3.41 *(5.49)*	2205	10	0.535 *(0.326)*	13.26 *(2.61)*	185 *(85)*	59 *(15)*	29.8 *(100.9)*
					10th(2D) Gear				
154.4 *(115.1)*	13940 *(62.0)*	4.15 *(6.68)*	2199	9	0.506 *(0.308)*	14.01 *(2.76)*	181 *(83)*	59 *(15)*	29.8 *(100.9)*
					11th(3A) Gear				
168.6 *(125.7)*	13610 *(60.5)*	4.64 *(7.47)*	2159	8	0.511 *(0.311)*	13.89 *(2.74)*	189 *(87)*	59 *(15)*	29.8 *(100.9)*
					12th(2E) Gear				
173.4 *(129.3)*	13825 *(61.5)*	4.70 *(7.57)*	2107	8	0.490 *(0.298)*	14.47 *(2.85)*	191 *(88)*	59 *(15)*	29.8 *(100.9)*
					13th(3B) Gear				
184.1 *(137.3)*	12835 *(57.1)*	5.38 *(8.65)*	2057	7	0.487 *(0.296)*	14.57 *(2.87)*	189 *(87)*	61 *(16)*	29.8 *(100.9)*
					14th(2F) Gear				
176.3 *(131.5)*	12075 *(53.7)*	5.48 *(8.82)*	2000	6	0.483 *(0.294)*	14.67 *(2.89)*	190 *(88)*	61 *(16)*	29.8 *(100.9)*
					15th(3C) Gear				
192.3 *(143.4)*	11625 *(51.7)*	6.21 *(9.99)*	2001	6	0.469 *(0.285)*	15.13 *(2.98)*	189 *(87)*	61 *(16)*	29.8 *(100.9)*
					16th(3D) Gear				
190.0 *(141.7)*	9410 *(41.9)*	7.57 *(12.19)*	2001	5	0.477 *(0.290)*	14.87 *(2.93)*	192 *(89)*	63 *(17)*	29.8 *(100.9)*
					*17th(3E) Gear				
185.5 *(138.3)*	8005 *(35.6)*	8.69 *(13.98)*	2002	6	0.488 *(0.297)*	14.52 *(2.86)*	196 *(91)*	63 *(17)*	29.8 *(100.9)*

*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 6497 with the Massey Ferguson 6499 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 manufacturer's claim remote flow claim of 39 GPM *(150 lpm)*, was not verified. 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. **2390,** Nebraska Summary 598, 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					
110.0 *(82.0)*	23695 *(105.4)*	1.74 *(2.80)*	2201	14.5	0.618 *(0.376)*	11.47 *(2.26)*	181 *(83)*	55 *(13)*	29.7 *(100.5)*
				6th(1F) Gear					
131.8 *(98.3)*	23065 *(102.6)*	2.14 *(3.45)*	2207	12.9	0.580 *(0.353)*	12.23 *(2.41)*	185 *(85)*	55 *(13)*	29.7 *(100.5)*
				7th(2A) Gear					
147.5 *(110.0)*	22595 *(100.5)*	2.45 *(3.94)*	2200	11.4	0.535 *(0.326)*	13.25 *(2.61)*	189 *(87)*	55 *(13)*	29.7 *(100.5)*
				8th(2B) Gear					
166.0 *(123.8)*	20750 *(92.3)*	3.00 *(4.83)*	2175	8.6	0.516 *(0.314)*	13.76 *(2.71)*	187 *(86)*	55 *(13)*	29.7 *(100.5)*
				9th(2C) Gear					
172.3 *(128.5)*	18145 *(80.7)*	3.56 *(5.73)*	2150	6.6	0.497 *(0.303)*	14.25 *(2.81)*	191 *(88)*	57 *(14)*	29.7 *(100.5)*
				10th(2D) Gear					
184.0 *(137.2)*	16905 *(75.2)*	4.08 *(6.57)*	2049	6.4	0.469 *(0.285)*	15.13 *(2.98)*	187 *(86)*	57 *(14)*	29.7 *(100.5)*
				11th(3A) Gear					
194.7 *(145.2)*	16200 *(72.1)*	4.51 *(7.25)*	2003	6.5	0.469 *(0.285)*	15.13 *(2.98)*	189 *(87)*	57 *(14)*	29.7 *(100.6)*
				12th(2E) Gear					
185.5 *(138.3)*	14690 *(65.3)*	4.73 *(7.62)*	2001	5.8	0.468 *(0.285)*	15.16 *(2.99)*	189 *(87)*	57 *(14)*	29.7 *(100.5)*
				13th(3B) Gear					
194.4 *(145.0)*	13310 *(59.2)*	5.48 *(8.82)*	1999	5.1	0.469 *(0.286)*	15.11 *(2.98)*	191 *(88)*	57 *(14)*	29.7 *(100.6)*
				14th(2F) Gear					
184.5 *(137.6)*	12050 *(53.6)*	5.74 *(9.24)*	1999	4.8	0.472 *(0.287)*	15.02 *(2.96)*	189 *(87)*	57 *(14)*	29.7 *(100.5)*
				15th(3C) Gear					
196.2 *(146.3)*	11420 *(50.8)*	6.44 *(10.37)*	1999	4.9	0.464 *(0.282)*	15.28 *(3.01)*	192 *(89)*	57 *(14)*	29.7 *(100.6)*
				16th(3D) Gear					
196.5 *(146.5)*	9485 *(42.2)*	7.77 *(12.51)*	1999	5.1	0.464 *(0.282)*	15.28 *(3.01)*	192 *(89)*	57 *(14)*	29.7 *(100.6)*
				*17th(3E) Gear					
193.4 *(144.2)*	7945 *(35.3)*	9.13 *(14.69)*	2004	5.0	0.469 *(0.285)*	15.13 *(2.98)*	190 *(88)*	57 *(14)*	29.7 *(100.6)*

*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*