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Nebraska Summary: S642 Massey Ferguson 7475

Nebraska Tractor Test Lab
University of Nebraska-Lincoln, tractortestlab@unl.edu

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SUMMARY OF OECD TEST 2431–NEBRASKA SUMMARY 642
MASSEY FERGUSON 7475 DYNAVT DIESEL CONTINOUSLY VARIABLE TRANSMISSION

Tractor chassis S/N S040033 and higher

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—1081 rpm)					
128.4 *(95.7)*	2200	8.16 *(30.88)*	0.452 *(0.275)*	15.74 *(3.10)*	
Standard Power Take-off Speed(1000 rpm)					
138.2 *(103.1)*	2034	8.05 *(30.47)*	0.415 *(0.252)*	17.17 *(3.38)*	
Maximum Power (1 hour)					
145.9 *(108.8)*	1800	8.10 *(30.64)*	0.395 *(0.240)*	18.02 *(3.55)*	
VARYING POWER AND FUEL CONSUMPTION					
128.4 *(95.7)*	2200	8.16 *(30.88)*	0.452 *(0.275)*	15.74 *(3.10)*	Air temperature
109.2 *(81.5)*	2202	7.31 *(27.68)*	0.477 *(0.290)*	14.94 *(2.94)*	70°F *(21°C)*
82.1 *(61.2)*	2210	6.18 *(23.40)*	0.535 *(0.326)*	13.28 *(2.62)*	Relative humidity
55.0 *(41.0)*	2223	4.65 *(17.59)*	0.602 *(0.366)*	11.83 *(2.33)*	51%
27.8 *(20.7)*	2237	3.12 *(11.80)*	0.799 *(0.486)*	8.91 *(1.76)*	Barometer
-- --	2245	1.90 *(7.19)*	-- --	-- --	29.9" Hg *(101.1 kPa)*

Maximum Torque - 457.9 lb.-ft. *(620.9 Nm)* at 1399 rpm
Maximum Torque Rise - 49.2%
Torque rise at 1750 engine rpm - 43%

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—Turtle 8									
107.3 *(80.0)*	8160 *(36.3)*	4.93 *(7.94)*	2191	5	0.542 *(0.330)*	13.16 *(2.59)*	183 *(84)*	45 *(7)*	29.3 *(99.1)*
75% of Pull at Maximum Power—Turtle 8									
81.9 *(61.1)*	6105 *(27.2)*	5.03 *(8.10)*	2193	4	0.595 *(0.362)*	11.97 *(2.36)*	180 *(82)*	45 *(7)*	29.3 *(99.1)*
50% of Pull at Maximum Power—Turtle 8									
56.1 *(41.8)*	4090 *(18.2)*	5.14 *(8.27)*	2209	2	0.676 *(0.411)*	10.54 *(2.08)*	181 *(83)*	45 *(7)*	29.3 *(99.1)*
75% of Pull at Reduced Engine Speed—Turtle 9									
82.9 *(61.8)*	6150 *(27.4)*	5.05 *(8.13)*	2012	4	0.541 *(0.329)*	13.15 *(2.59)*	181 *(83)*	45 *(7)*	29.3 *(99.1)*
50% of Pull at Reduced Engine Speed—Turtle 9									
55.7 *(41.5)*	4070 *(18.1)*	5.13 *(8.26)*	2003	2	0.607 *(0.369)*	11.73 *(2.31)*	180 *(82)*	45 *(7)*	29.3 *(99.1)*

Location of tests: Groupement d'Antony, Parc de Touvoie, BP 44 Antony, France 92163

Dates of tests: March - May, 2008

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** 7.11 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** SAE 85W140 API GL-5

ENGINE: Make Perkins Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** U004188P **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.134" x 5.000"*(105.0 mm x 127.0 mm)* **Compression ratio** 16.2 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.** S171018 **Tread width** rear 61.7" *(1566 mm)* to 74.6" *(1896 mm)* front 63.4" *(1610 mm)* to 78.1" *(1984 mm)* **Wheelbase** 109.4" *(2780 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 0-18 *(0-29)*, high range 0-25 *(0-40)* reverse: Low range 0-18 *(0-29)*, high range 0-25*(0-40)* **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** 540 rpm at 2062 engine rpm or 1000 rpm at 2034 engine rpm **Unladen tractor mass** 14780 lb *(6705 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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					Turtle 5				
91.2 *(68.0)*	13060 *(58.1)*	2.62 *(4.22)*	2197	15	0.604 *(0.368)*	11.78 *(2.32)*	174 *(79)*	45 *(7)*	29.3 *(99.1)*
					Turtle 6				
105.7 *(78.8)*	12950 *(57.6)*	3.06 *(4.92)*	2131	14	0.533 *(0.324)*	13.35 *(2.63)*	174 *(79)*	45 *(7)*	29.3 *(99.1)*
					Turtle 7				
113.6 *(84.7)*	12545 *(55.8)*	3.39 *(5.46)*	1864	11	0.508 *(0.309)*	14.01 *(2.76)*	176 *(80)*	45 *(7)*	29.3 *(99.1)*
					Turtle 8				
117.6 *(87.7)*	11130 *(49.5)*	3.96 *(6.38)*	1840	10	0.494 *(0.301)*	14.41 *(2.84)*	176 *(80)*	45 *(7)*	29.3 *(99.1)*
					Turtle 9				
118.9 *(88.7)*	10230 *(45.5)*	4.36 *(7.02)*	1811	8	0.483 *(0.294)*	14.72 *(2.90)*	180 *(82)*	45 *(7)*	29.3 *(99.1)*
					Turtle 10				
120.3 *(89.7)*	9035 *(40.2)*	4.99 *(8.03)*	1813	7	0.459 *(0.279)*	15.49 *(3.05)*	180 *(82)*	45 *(7)*	29.3 *(99.1)*
					Turtle 11				
119.9 *(89.4)*	7620 *(33.9)*	5.90 *(9.49)*	1801	6	0.478 *(0.291)*	14.87 *(2.93)*	181 *(83)*	45 *(7)*	29.3 *(99.1)*
					Rabbit 9				
112.6 *(84.0)*	9645 *(42.9)*	4.38 *(7.05)*	1925	8	0.512 *(0.311)*	13.90 *(2.74)*	176 *(80)*	46 *(8)*	29.3 *(99.1)*
					Rabbit 12				
120.3 *(89.7)*	7870 *(35.0)*	5.73 *(9.22)*	1796	7	0.464 *(0.282)*	15.33 *(3.02)*	180 *(82)*	46 *(8)*	29.3 *(99.1)*
					Rabbit 14				
120.7 *(90.0)*	6700 *(29.8)*	6.76 *(10.88)*	1803	6	0.480 *(0.292)*	14.82 *(2.92)*	181 *(83)*	46 *(8)*	29.3 *(99.1)*
					Rabbit 16				
119.9 *(89.4)*	5415 *(24.1)*	8.30 *(13.36)*	1807	4	0.482 *(0.293)*	14.77 *(2.91)*	181 *(83)*	46 *(8)*	29.3 *(99.1)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE: The performance figures on this report apply to tractors with chassis S/N S040033 and higher.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The manufacturer's three point lift claim of 10500 lbs *(4762 kg)* with category III hitch 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. **2431,** Nebraska Summary 642, January 14, 2010.

Roger M. Hoy
Director

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

TRACTOR SOUND LEVEL WITH CAB	dB(A)
At no load in Turtle 7	69.0
Bystander	---

TIRES, BALLAST AND WEIGHT	With Ballast	Without Ballast
Rear tires - No.,size, ply & psi*(kPa)*	Four 480/80R42; **;15*(100)*	Two 480/80R42;**;15*(100)*
Ballast - Duals(total)	1390 lb *(630 kg)*	None
- Cast iron(total)	1145 lb *(520 kg)*	None
Front tires - No.,size, ply & psi*(kPa)*	Two 16.9R28;**;15 *(100)*	Two 16.9R28;**;15*(100)*
Ballast - Liquid(total)	None	None
- Cast Iron(total)	860 lb *(390 kg)*	None
Height of Drawbar	18.5 in *(470 mm)*	18.5 in *(470 mm)*
Static Weight with operator- Rear	11685 lb (*5300 kg)*	9090 lb *(4260 kg)*
- Front	6655 lb(*3020 kg)*	5555 lb *(2520 kg)*
- Total	18340 lb(*8320 kg)*	14945 lb *(6780 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)*
					Turtle 4				
97.9 *(73.0)*	16230 *(72.2)*	2.26 *(3.64)*	2172	15	0.594 *(0.361)*	11.98 *(2.36)*	172 *(78)*	45 *(7)*	29.3 *(99.1)*
					Turtle 5				
105.1 *(78.4)*	14895 *(66.3)*	2.65 *(4.26)*	2134	11	0.552 *(0.336)*	12.89 *(2.54)*	174 *(79)*	45 *(7)*	29.3 *(99.1)*
					Turtle 6				
111.3 *(83.0)*	14165 *(63.0)*	2.95 *(4.75)*	1963	10	0.519 *(0.316)*	13.71 *(2.70)*	176 *(80)*	45 *(7)*	29.3 *(99.1)*
					Turtle 7				
116.9 *(87.2)*	13030 *(58.0)*	3.37 *(5.42)*	1815	8	0.494 *(0.300)*	14.42 *(2.84)*	176 *(80)*	45 *(7)*	29.3 *(99.1)*
					Turtle 8				
119.2 *(88.9)*	11040 *(49.1)*	4.05 *(6.52)*	1825	7	0.483 *(0.294)*	14.72 *(2.90)*	180 *(82)*	46 *(8)*	29.3 *(99.1)*
					Turtle 9				
119.8 *(89.3)*	10070 *(44.8)*	4.46 *(7.18)*	1804	6	0.470 *(0.286)*	15.13 *(2.98)*	180 *(82)*	46 *(8)*	29.3 *(99.1)*
					Turtle 10				
119.9 *(89.4)*	8905 *(39.6)*	5.05 *(8.12)*	1809	6	0.480 *(0.292)*	14.82 *(2.92)*	180 *(82)*	46 *(8)*	29.3 *(99.1)*
					Turtle 11				
119.6 *(89.2)*	7420 *(33.0)*	6.05 *(9.73)*	1799	6	0.483 *(0.294)*	14.92 *(2.90)*	183 *(84)*	46 *(8)*	29.3 *(99.1)*
					Rabbit 9				
111.3 *(83.0)*	9225 *(41.0)*	4.52 *(7.28)*	1935	10	0.521 *(0.317)*	13.65 *(2.69)*	185 *(85)*	46 *(8)*	29.3 *(99.1)*
					Rabbit 12				
119.6 *(89.2)*	7755 *(34.5)*	5.78 *(9.31)*	1803	7	0.485 *(0.295)*	14.67 *(2.89)*	180 *(82)*	46 *(8)*	29.3 *(99.1)*
					Rabbit 14				
119.9 *(89.4)*	6570 *(29.2)*	6.84 *(11.01)*	1810	6	0.480 *(0.292)*	14.82 *(2.92)*	176 *(80)*	46 *(8)*	29.3 *(99.1)*
					Rabbit 16				
119.8 *(89.3)*	5395 *(24.0)*	8.32 *(13.39)*	1805	3	0.483 *(0.294)*	14.72 *(2.90)*	180 *(82)*	46 *(8)*	29.2 *(99.0)*

HYDRAULIC PERFORMANCE

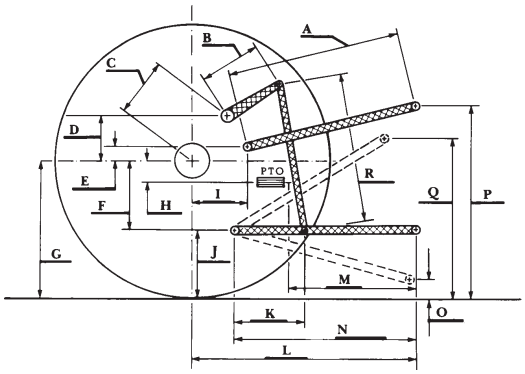
CATEGORY: II	
Quick Attach: None	
OECD Static test	
Maximum force exerted through whole range:	12630 lbs *(56.2 kN)*
i) Opening pressure of relief valve:	NA
Sustained pressure of the open relief valve:	2900 psi *(200 bar)*
ii) Pump delivery rate at minimum pressure:	30.2 GPM *(114.2 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	25.9 GPM *(98.2 l/min)*
Delivery pressure:	2395 psi *(165 bar)*
Power:	36.2 HP *(27.0 kW)*

THREE POINT HITCH PERFORMANCE - SAE Test

Observed Maximum Pressure psi. *(bar)*	2900 *(200)*
Location:	lift cylinder
Hydraulic oil temperature: °F *(°C)*	158 *(70)*
Location:	hydraulic sump
Category:	II
Quick attach:	None

System pressure 2610 psi *(180 bar)*

Hitch point distance to ground level in. *(mm)*	12.0 *(280)*	17.7 *(419)*	23.6 *(560)*	27.6 *(679)*	33.5 *(825)*	38.3 *(964)*
Lift force on frame lb	14300	14815	15175	15510	15445	14410
" " " " " " *(kN)*	*(63.6)*	*(65.9)*	*(67.5)*	*(69.0)*	*(68.7)*	*(64.1)*

HITCH DIMENSIONS AS TESTED - NO LOAD

	SAE TEST		OECD TEST	
	inch	*mm*	inch	*mm*
A	30.5	*775*	30.0	*763*
B	13.4	*340*	13.4	*340*
C	13.9	*354*	13.9	*354*
D	11.9	*303*	11.9	*303*
E	12.9	*328*	10.9	*276*
F	10.3	*261*	10.3	*261*
G	34.5	*875*	34.5	*875*
H	2.4	*60*	2.4	*60*
I	13.7	*348*	14.4	*367*
J	24.2	*614*	24.2	*614*
K	26.2	*665*	26.2	*665*
L	45.9	*1166*	45.9	*1166*
M	26.4	*670*	26.4	*670*
N	40.2	*1021*	40.2	*1021*
O	10.8	*274*	8.4	*214*
P	43.2	*1097*	48.2	*1224*
Q	37.1	*942*	37.8	*959*
R	28.7	*729*	30.5	*775*