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2015

Nebraska Summary: S1018 Massey Ferguson 7724

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SUMMARY OF OECD TEST 2916–NEBRASKA SUMMARY 1018
MASSEY FERGUSON 7724 DYNA 6 DIESEL
24 SPEED

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—1088 rpm)						
201.0 *(149.9)*	2099	11.93 *(45.15)*	0.414 *(0.252)*	16.85 *(3.32)*	0.76 *(2.88)*	
Maximum Power (1 hour)						
217.2 *(162.0)*	1949	12.24 *(46.34)*	0.393 *(0.239)*	17.75 *(3.50)*	0.84 *(3.17)*	
Standard Power Take-off Speed (1000 rpm)						
216.6 *(161.5)*	1930	12.21 *(46.21)*	0.393 *(0.239)*	17.74 *(3.50)*	0.84 *(3.18)*	
VARYING POWER AND FUEL CONSUMPTION						
201.0 *(149.9)*	2099	11.93 *(45.15)*	0.414 *(0.252)*	16.85 *(3.32)*	0.76 *(2.88)*	Air temperature
172.5 *(128.6)*	2118	10.33 *(39.12)*	0.418 *(0.254)*	16.70 *(3.29)*	0.61 *(2.32)*	75°F *(24°C)*
129.9 *(96.9)*	2128	8.11 *(30.70)*	0.435 *(0.265)*	16.02 *(3.16)*	0.45 *(1.71)*	Relative humidity
87.0 *(64.9)*	2136	6.05 *(22.88)*	0.486 *(0.295)*	14.39 *(2.83)*	0.38 *(1.43)*	52%
43.7 *(32.6)*	2146	4.07 *(15.42)*	0.651 *(0.396)*	10.73 *(2.11)*	0.23 *(0.87)*	Barometer
-- --	2153	2.38 *(9.01)*	-- --	-- --	-- --	30.2" Hg *(102.2 kPa)*

Maximum torque - 737.3 lb.-ft. *(999.6 Nm)* at 1150 rpm
Maximum torque rise - 46.5%
Torque rise at 1700 engine rpm - 23%
Power increase at 1950 engine rpm - 8.1%

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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
Power at Rated Engine Speed—13th(3B) Gear									
170.4 *(127.1)*	10745 *(47.8)*	5.95 *(9.57)*	2096	5.2	0.484 *(0.295)*	14.30 *(2.82)*	190 *(88)*	86 *(30)*	29.9 *(101.4)*
75% of Pull at Rated Engine Speed—13th(3B) Gear									
132.1 *(98.5)*	8050 *(35.8)*	6.15 *(9.90)*	2128	3.7	0.535 *(0.325)*	12.94 *(2.55)*	190 *(88)*	86 *(30)*	29.9 *(101.4)*
50% of Pull at Rated Engine Speed—13th(3B) Gear									
90.7 *(67.6)*	5445 *(24.2)*	6.25 *(10.05)*	2134	2.2	0.650 *(0.396)*	10.65 *(2.10)*	187 *(86)*	86 *(30)*	30.0 *(101.5)*
75% of Pull at Reduced Engine Speed—15th(3C) Gear									
131.8 *(98.3)*	8070 *(35.9)*	6.13 *(9.86)*	1829	3.8	0.482 *(0.293)*	14.37 *(2.83)*	189 *(87)*	86 *(30)*	30.0 *(101.5)*
50% of Pull at Reduced Engine Speed—15th(3C) Gear									
91.2 *(68.0)*	5440 *(24.2)*	6.29 *(10.12)*	1834	2.2	0.510 *(0.310)*	13.60 *(2.68)*	185 *(85)*	86 *(30)*	30.0 *(101.5)*

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

Dates of tests: July to August, 2015

Manufacturer: AGCO S.A. BP 307, Avenue Blaise Pascal, 60026 Beauvais, France

CONSUMABLE FLUIDS: **Fuel** No. 2 Diesel **Specific gravity converted to 60°/60°F** *(15°/15°C)* 0.838 **Fuel weight** 6.98 lbs/gal *(0.836 kg/l)* **Diesel Exhaust Fluid (DEF)** 32% aqueous urea solution **DEF weight** 9.10 lbs/gal *(1.091 kg/l)* **Oil SAE** 15W40 **API service classification** CJ-4 **Transmission and hydraulic lubricant** BP Terrac Tractan 9 15W/40 **Front axle lubricant** BP Terrac Tractan 9 15W/40

ENGINE: Make AGCO Power Diesel **Type** six cylinder vertical with turbocharger, air to air intercooler and SCR (selective catalyst reduction) exhaust treatment **Serial No.** Y00233 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.252" x 5.276" *(108.0 mm x 134.0 mm)* **Compression ratio** 17.8 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** three paper cartridges **Muffler** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: Type front wheel assist **Serial No.** D 119901 **Tread width** rear 52.8" *(1340 mm)* to 87.8" *(2230 mm)* front 52.8" *(1340 mm)* to 87.8" *(2230 mm)* **Wheelbase** 117.0" *(2973 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 *(1.60)* second 1.19 *(1.92)* third 1.40 *(2.25)* fourth 1.68 *(2.71)* fifth 1.98 *(3.19)* sixth 2.39 *(3.84)* seventh 2.68 *(4.32)* eighth 3.23 *(5.19)* ninth 3.78 *(6.09)* tenth 4.55 *(7.33)* eleventh 5.14 *(8.27)* twelfth 5.36 *(8.62)* thirteenth 6.18 *(9.94)* fourteenth 6.45 *(10.38)* fifteenth 7.25 *(11.67)* sixteenth 8.72 *(14.04)* seventeenth 10.26 *(16.51)* eighteenth 12.35 *(19.87)* nineteenth 14.26 *(22.95)* twentieth 17.15 *(27.60)* twenty-first 20.13 *(32.39)* twenty-second 24.22 *(38.98)* twenty-third 24.86 *(40.00)* twenty-fourth 24.86 *(40.00)* electronically limited reverse 0.99 *(1.60)*, 1.19 *(1.92)*, 1.40 *(2.25)*, 1.68 *(2.71)*, 1.98 *(3.19)*, 2.39 *(3.84)*, 2.68 *(4.32)*, 3.23 *(5.19)*, 3.78 *(6.09)*, 4.55 *(7.33)*, 5.14 *(8.27)*, 5.36 *(8.62)*, 6.18 *(9.94)*, 6.45 *(10.38)*, 7.25 *(11.67)*, 8.72 *(14.04)* 10.26 *(16.51)*, 12.35 *(19.87)*, 14.26 *(22.95)*, 17.15 *(27.60)*, 20.13 *(32.39)*, 24.22 *(38.98)*, 24.86 *(40.00)*, 24.86 *(40.00)* electronically limited

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)*
				3rd(1C) Gear					
59.4 *(44.3)*	18120 *(80.6)*	1.23 *(1.98)*	2137	15.0	0.654 *(0.398)*	10.60 *(2.09)*	180 *(82)*	77 *(25)*	29.9 *(101.4)*
				4th(1D) Gear					
72.0 *(53.7)*	17805 *(79.2)*	1.52 *(2.44)*	2133	13.0	0.614 *(0.373)*	11.29 *(2.22)*	181 *(83)*	77 *(25)*	29.9 *(101.4)*
				5th(1E) Gear					
84.1 *(62.7)*	17155 *(76.3)*	1.84 *(2.96)*	2131	10.0	0.578 *(0.352)*	11.98 *(2.36)*	181 *(83)*	79 *(26)*	29.9 *(101.4)*
				6th(1F) Gear					
100.2 *(74.7)*	16885 *(75.1)*	2.23 *(3.58)*	2128	9.0	0.561 *(0.341)*	12.34 *(2.43)*	187 *(86)*	79 *(26)*	29.9 *(101.4)*
				7th(2A) Gear					
113.5 *(84.6)*	16905 *(75.2)*	2.52 *(4.05)*	2124	9.1	0.531 *(0.323)*	13.05 *(2.57)*	189 *(87)*	79 *(26)*	29.9 *(101.4)*
				8th(2B) Gear					
136.0 *(101.4)*	16950 *(75.4)*	3.01 *(4.84)*	2114	9.2	0.515 *(0.313)*	13.45 *(2.65)*	189 *(87)*	81 *(27)*	29.9 *(101.4)*
				9th(2C) Gear					
151.4 *(112.9)*	16320 *(72.6)*	3.48 *(5.60)*	2058	8.0	0.496 *(0.302)*	13.96 *(2.75)*	192 *(89)*	81 *(27)*	29.9 *(101.4)*
				*10th(2D) Gear					
164.0 *(122.3)*	15175 *(67.5)*	4.05 *(6.52)*	1986	6.6	0.496 *(0.302)*	13.96 *(2.75)*	192 *(89)*	81 *(27)*	29.9 *(101.4)*
				*11th(3A) Gear					
181.8 *(135.6)*	15220 *(67.7)*	4.48 *(7.21)*	1953	6.7	0.469 *(0.285)*	14.77 *(2.91)*	194 *(90)*	84 *(29)*	29.9 *(101.4)*
				*12th(2E) Gear					
177.3 *(132.2)*	14075 *(62.6)*	4.72 *(7.60)*	1950	6.0	0.477 *(0.290)*	14.57 *(2.87)*	192 *(89)*	82 *(28)*	29.9 *(101.4)*
				*13th(3B) Gear					
184.9 *(137.9)*	12815 *(57.0)*	5.41 *(8.71)*	1940	5.5	0.459 *(0.279)*	15.08 *(2.97)*	192 *(89)*	86 *(30)*	29.9 *(101.4)*
				*14th(2F) Gear					
182.6 *(136.2)*	11780 *(52.4)*	5.81 *(9.36)*	1965	5.0	0.467 *(0.284)*	14.82 *(2.92)*	194 *(90)*	84 *(29)*	29.9 *(101.4)*
				*15th(3C) Gear					
186.4 *(139.0)*	10610 *(47.2)*	6.59 *(10.60)*	1955	4.7	0.459 *(0.279)*	15.08 *(2.97)*	192 *(89)*	86 *(30)*	30.0 *(101.5)*
				*16th(3D) Gear					
184.7 *(137.7)*	8655 *(38.5)*	8.00 *(12.88)*	1964	3.8	0.458 *(0.279)*	15.13 *(2.98)*	192 *(89)*	86 *(30)*	30.0 *(101.5)*
				*17th(3E) Gear					
179.7 *(134.0)*	7105 *(31.6)*	9.50 *(15.27)*	1964	3.0	0.482 *(0.293)*	14.37 *(2.83)*	190 *(88)*	88 *(31)*	30.0 *(101.5)*
				*18th(3F) Gear					
172.3 *(128.5)*	5690 *(25.3)*	11.36 *(18.28)*	1963	2.0	0.500 *(0.304)*	13.86 *(2.73)*	192 *(89)*	89 *(32)*	30.0 *(101.5)*

*Powerboost mode

TRACTOR SOUND LEVEL WITH CAB	Front wheel drive Engaged dB(A)	Disengaged dB(A)
At no load in 10th (2D) gear	70.0	69.0
Bystander		--

TIRES, BALLAST AND WEIGHT

	Tested without ballast
Rear Tires - No., size, ply & psi*(kPa)*	Two 650/85R38;**;15*(100)*
Front Tires - No., size, ply & psi*(kPa)*	Two 600/70R28;**;16*(110)*
Height of Drawbar	23.6 in *(600 mm)*
Static Weight with operator - Rear	11665 lb *(5290 kg)*
- Front	8345 lb *(3785 kg)*
- Total	20010 lb *(9075 kg)*

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 1890 engine rpm or 1000 rpm at 1930 engine rpm **Unladen tractor mass** 19840 lb *(9000 kg)*

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: This tractor has a power management system that provides an engine power increase when the PTO is engaged and for travel speeds from gear 2D and higher.

NOTE 2: The performance figures on this report are the result of replacing the electronic engine control module of the Massey Ferguson 7726 with the Massey Ferguson 7724 module.

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 2 test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2916,** Nebraska Summary 1018, June 16, 2016.

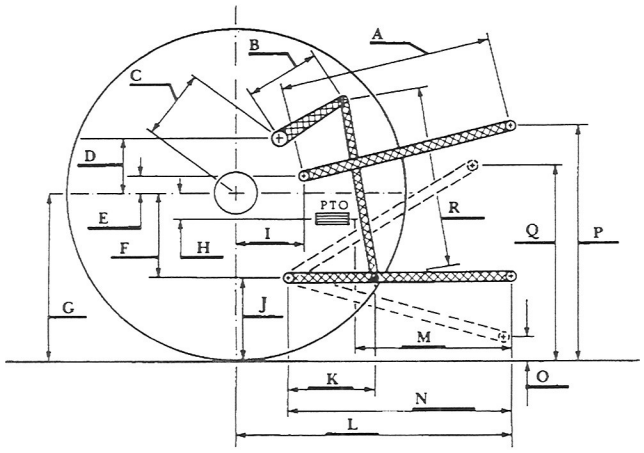
Roger M. Hoy
Director

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

HYDRAULIC PERFORMANCE

CATEGORY: III
Quick Attach: None
OECD Static test

Maximum force exerted through whole range:	13920 lbs *(61.9 kN)*	
i) Sustained pressure of the open relief valve:	2700 psi *(186 bar)*	
	Standard Pump	Optional pump
	29 GPM *(110 l/min)*	39 GPM *(150 l/min)*
	two outlet sets combined	two outlet sets combined
ii) Pump delivery rate at minimum pressure:	30.7 GPM *(116.2 l/min)*	42.1 GPM *(159.2 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	29.2 GPM *(110.5 l/min)*	38.6 GPM *(146.3 l/min)*
Delivery pressure:	1990 psi *(137 bar)*	1820 psi *(126 bar)*
Power:	33.9 HP *(25.2 kW)*	41.0 HP *(30.6 kW)*
	single outlet set	single outlet set
ii) Pump delivery rate at minimum pressure:	30.2 GPM *(114.2 l/min)*	29.6 GPM *(112.0 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	28.6 GPM *(108.3 l/min)*	27.0 GPM *(102.1 l/min)*
Delivery pressure:	1975 psi *(136 bar)*	1945 psi *(134 bar)*
Power:	32.9 HP *(24.5 kW)*	30.6 HP *(22.8 kW)*



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	31.1	*790*
B	15.7	*400*
C	20.7	*525*
D	19.1	*485*
E	8.3	*210*
F	12.2	*310*
G	38.4	*975*
H	2.0	*50*
I	17.7	*450*
J	26.2	*665*
K	23.3	*591*
L	48.3	*1228*
M	23.6	*600*
N	38.2	*970*
O	9.3	*235*
P	44.7	*1135*
Q	40.0	*1017*
R	39.4	*1000*