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Test 1774: Zetor 10641/Zetor 10741 Diesel

Nebraska Tractor Test Lab

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SUMMARY OF OECD TEST 1774—NEBRASKA SUMMARY 445

ZETOR 10641 DIESEL

ALSO ZETOR 10741 DIESEL

24 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft 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-1128 rpm)					
90.3 (67.3)	2200	5.95 (22.54)	0.458 (0.279)	15.16 (2.99)	
Maximum Power (2 hours)					
91.2 (68.0)	2100	5.82 (22.04)	0.443 (0.270)	15.66 (3.09)	
Standard Power Take-off Speed (1000 rpm)					
91.0 (67.8)	1950	5.55 (21.01)	0.422 (0.257)	16.40 (3.23)	

VARYING POWER AND FUEL CONSUMPTION

90.3 (67.3)	2200	5.95 (22.54)	0.458 (0.279)	15.16 (2.99)	Air temperature
78.3 (58.4)	2246	5.45 (20.63)	0.483 (0.294)	14.37 (2.83)	70°F (21°C)
59.4 (44.3)	2274	4.62 (17.48)	0.540 (0.328)	12.86 (2.53)	Relative humidity
40.2 (30.0)	2311	3.83 (14.50)	0.661 (0.402)	10.51 (2.07)	30%
20.4 (15.2)	2342	2.99 (11.33)	1.019 (0.620)	6.81 (1.34)	Barometer
--	2381	2.14 (8.09)	--	--	28.8" Hg (97.5 kPa)

Maximum Torque - 286 lb.-ft. (388 Nm) at 1500 rpm
 Maximum Torque Rise - 32.9%
 Torque rise at 1800 engine rpm - 20%

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 (1 Hi H) Gear									
72.7 (54.2)	4340 (19.3)	6.28 (10.11)	2200	4.4	0.531 (0.323)	13.20 (2.60)	187 (86)	81 (27)	28.6 (96.7)
75% of Pull at Maximum Power—15th (1 Hi H) Gear									
56.5 (42.1)	3260 (14.5)	6.49 (10.45)	2246	3.2	0.586 (0.357)	11.95 (2.36)	190 (88)	77 (25)	28.6 (96.7)
50% of Pull at Maximum Power—15th (1 Hi H) Gear									
38.9 (29.0)	2180 (9.7)	6.69 (10.76)	2285	1.8	0.705 (0.429)	9.95 (1.96)	190 (88)	77 (25)	28.6 (96.7)
75% of Pull at Reduced Engine Speed—16th (2 Hi L) Gear									
56.3 (42.0)	3260 (14.5)	6.48 (10.43)	2081	3.2	0.548 (0.333)	12.79 (2.52)	192 (89)	75 (24)	28.5 (96.6)
50% of Pull at Reduced Engine Speed—16th (2 Hi L) Gear									
38.8 (28.9)	2180 (9.7)	6.67 (10.74)	2113	1.8	0.648 (0.394)	10.81 (2.13)	190 (88)	75 (24)	28.5 (96.6)

Location of Test: SZZPLS Praha, Czech Republic

Dates of Test: March to June 1998

Manufacturer: Zetor a.s., CZ-632 Brno, Czech Republic

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.834 **Fuel weight** 6.94 lbs/gal (0.832 kg/l) **Oil** SAE 15W-40 **API service classification** SF/CC **Transmission and hydraulic lubricant** SAE 80W gear oil **Front axle lubricant** SAE 80W gear oil

ENGINE: Make Zetor Diesel **Type** four cylinder vertical with turbocharger and intercooler **Serial No.** 001 001 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.134" x 4.724" (105.0 mm x 120.0 mm) **Compression ratio** 17.0 to 1 **Displacement** 254 cu in (4156 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow element **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

CHASSIS: **Type** front wheel assist **Serial No.** *1303-001 001* **Tread width** rear 59.1" (1500 mm) to 70.9" (1800 mm) front 64.0" (1625 mm) to 73.2" (1860 mm) **Wheel base** 94.0" (2388 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (3) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.16 (1.86) second 1.34 (2.15) third 1.54 (2.48) fourth 1.66 (2.67) fifth 1.92 (3.09) sixth 2.22 (3.57) seventh 2.70 (4.34) eighth 3.12 (5.02) ninth 3.61 (5.81) tenth 3.86 (6.21) eleventh 4.47 (7.19) twelfth 4.77 (7.67) thirteenth 5.16 (8.31) fourteenth 5.52 (8.88) fifteenth 6.38 (10.27) sixteenth 6.86 (11.04) seventeenth 7.94 (12.78) eighteenth 9.18 (14.78) nineteenth 11.15 (17.94) twentieth 12.91 (20.77) twenty-first 14.92 (24.01) twenty-second 15.96 (25.68) twenty-third 18.47 (29.73) twenty-fourth 21.36 (34.37) reverse 1.34 (2.15), 1.54 (2.48), 1.78 (2.87), 1.92 (3.09), 2.22 (3.57), 2.57 (4.13), 3.12 (5.02), 3.61 (5.81), 4.17 (6.71), 5.51 (8.87), 6.38 (10.27), 7.38 (11.87), 7.94 (12.77), 9.18 (14.78), 10.62 (17.09), 12.89 (20.74), 14.92 (24.01), 17.25 (27.76) **Clutch** dry disc hydraulically operated by foot pedal **Brakes** multi wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1913 engine rpm and 1000 rpm at 1950 engine rpm **Unladen tractor mass** 8930 lb (4050 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)	Consumption Hp.hr/gal (kW.h/l)	Temp. °F cool- ing med	Temp. °C Air dry bulb	Barom. inch Hg (kPa)
9th (3 Lo H) Gear									
66.1 (49.3)	7890 (35.1)	3.14 (5.06)	2191	15.0	0.588 (0.357)	11.93 (2.35)	185 (85)	73 (23)	28.6 (96.8)
10th (4 Lo L) Gear									
69.2 (51.6)	7755 (34.5)	3.35 (5.38)	2099	11.9	0.550 (0.335)	12.74 (2.51)	187 (86)	75 (24)	28.6 (96.9)
11th (4 Lo M) Gear									
73.1 (54.5)	6765 (30.1)	4.05 (6.52)	2102	7.8	0.523 (0.318)	13.40 (2.64)	187 (86)	77 (25)	28.6 (96.9)
12th (1 Hi L) Gear									
73.4 (54.7)	6340 (28.2)	4.34 (6.98)	2097	7.2	0.521 (0.317)	13.45 (2.65)	187 (86)	81 (27)	28.6 (96.9)
13th (4 Lo H) Gear									
72.4 (54.0)	5710 (25.4)	4.76 (7.66)	2105	6.4	0.526 (0.320)	13.33 (2.63)	187 (86)	81 (27)	28.6 (96.8)
14th (1 Hi M) Gear									
73.8 (55.0)	5415 (24.1)	5.11 (8.22)	2103	5.9	0.517 (0.315)	13.55 (2.67)	187 (86)	81 (27)	28.6 (96.7)
15th (1 Hi H) Gear									
74.3 (55.4)	4675 (20.8)	5.96 (9.59)	2098	4.8	0.511 (0.311)	13.71 (2.70)	187 (86)	81 (27)	28.6 (96.7)
16th (2 Hi L) Gear									
73.5 (54.8)	4270 (19.0)	6.45 (10.38)	2104	4.4	0.519 (0.316)	13.50 (2.66)	187 (86)	81 (27)	28.6 (96.7)
17th (2 Hi M) Gear									
72.4 (54.0)	3595 (16.0)	7.55 (12.15)	2106	3.6	0.525 (0.319)	13.35 (2.63)	190 (88)	79 (26)	28.6 (96.7)
18th (2 Hi H) Gear									
72.0 (53.7)	3080 (13.7)	8.76 (14.10)	2104	3.1	0.527 (0.321)	13.30 (2.62)	190 (88)	79 (26)	28.6 (96.7)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet manufacturers claims of 19.0 GPM remote flow nor 3 point lift claim of 9300 lbs at 24" frame. The performance results on this summary were taken from OECD tests conducted under the Code II Test Code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1774**, Nebraska Summary 445, September 17, 2004.

Leonard L. Bashford
 Director

M.F. Kocher
 V.I. Adamchuk
 W.P. Campbell
 Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	dB(A)
At no load in 12th (1 Hi L) Gear	81.5
Bystander in 24th (4 Hi H) Gear	87.0

TIRES AND WEIGHT

Rear Tires—No., size, ply & psi (kPa)
Front Tires—No., size, ply & psi (kPa)
Height of Drawbar
Static Weight with operator—Rear
 —Front
 —Total

Tested Without Ballast

Two 18.4R38;**, 16 (110)
 Two 14.9R24;**, 17 (120)
 15.0 in (374 mm)
 5470 lb (2480 kg)
 3625 lb (1645 kg)
 9095 lb (4125 kg)

Supplementary tests with emissionized engine

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-1128 rpm)					
88.0 (65.6)	2200	5.76 (21.79)	0.459 (0.279)	15.28 (3.01)	
Maximum Power (2 hours)					
92.8 (69.2)	2100	5.86 (22.18)	0.442 (0.269)	15.84 (3.12)	
Standard Power Take-off Speed (1000 rpm)					
91.3 (68.1)	1950	5.54 (20.98)	0.424 (0.258)	16.50 (3.25)	
VARYING POWER AND FUEL CONSUMPTION					
88.0 (65.6)	2200	5.76 (21.79)	0.459 (0.279)	15.28 (3.01)	Air temperature
76.8 (57.3)	2262	5.29 (20.02)	0.482 (0.293)	14.52 (2.86)	75°F (24°C)
58.6 (43.7)	2299	4.49 (17.01)	0.537 (0.327)	13.04 (2.57)	Relative humidity
39.7 (29.6)	2334	3.67 (13.89)	0.648 (0.394)	10.81 (2.13)	48%
20.1 (15.0)	2371	2.81 (10.62)	0.976 (0.594)	7.17 (1.41)	Barometer
--	2400	1.99 (7.53)	--	--	28.5" Hg (96.6 kPa)
--			--	--	

Maximum Torque - 296 lb.-ft. (401 Nm) at 1451 rpm
 Maximum Torque Rise - 41.0%
 Torque rise at 1800 engine rpm - 26%

Location of Test: SZZPLS Praha, Czech Republic

Dates of Test: August 6, 2002

Manufacturer: Zetor a.s., CZ-632 Brno, Czech Republic

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F (15°/15°C)** 0.841 **Fuel weight** 7.01 lbs/gal (0.839 kg/l) **Oil SAE** 15W-40 **API service classification** SF/CC **Transmission and hydraulic lubricant** SAE 80W gear oil **Front axle lubricant** SAE 80W gear oil

ENGINE: **Make** Zetor Diesel **Type** four cylinder vertical with turbocharger and intercooler **Serial No.** K1064103013C **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.134" x 4.724" (105.0 mm x 120.0 mm) **Compression ratio** 17.0 to 1 **Displacement** 254 cu in (4156 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow element **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

CHASSIS: **Type** front wheel assist **Serial No.** *1303-001 514* **Tread width** rear 59.1" (1500 mm) to 70.9" (1800 mm) front 64.0" (1625 mm) to 73.2" (1860 mm) **Wheel base** 94.0" (2388 mm)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: none

Maximum Force Exerted Through Whole Range: 8835 lbs (39.3 kN) (at 24" frame)
 10995 lbs (48.9 kN) (at lower link ends)

- i) Opening pressure of relief valve: NA
- Sustained pressure of the open relief valve: 2800 psi (193 bar)
- ii) Pump delivery rate at minimum pressure: 17.4 GPM (66.0 l/min)
- iii) Pump delivery rate at maximum
 - hydraulic power: 15.9 GPM (60.0 l/min)
 - Delivery pressure: 2350 psi (162 bar)
 - Power: 21.8 HP (16.2 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	27.9	709
B	13.0	330
C	12.3	313
D	10.8	275
E	4.9	125
F	9.7	245
G	32.3	820
H	4.9	125
I	14.1	358
J	22.6	575
K	19.7	500
L	41.0	1042
M	22.1	562
N	35.1	892
O	7.9	200
P	46.7	1185
Q	34.7	882
R	26.2	665

