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Nebraska Summary S021: Zetor 16145

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SUMMARY OF OECD TEST 910—NEBRASKA SUMMARY 021
ZETOR 16145 DIESEL
12 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Fuel Consumption 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—1148 rpm)					
135.9 *(101.4)*	2205	7.91 *(29.94)*	0.413 *(0.251)*	17.21 *(3.39)*	
Standard Power Take-off Speed (1000 rpm)					
128.6 *(95.9)*	1920	7.05 *(26.67)*	0.389 *(0.236)*	18.22 *(3.59)*	
VARYING POWER AND FUEL CONSUMPTION					Air temperature
119.7 *(89.3)*	2277	7.32 *(27.72)*	0.434 *(0.264)*	16.29 *(3.21)*	72°F *(22°C)*
....	2465	2.25 *(8.52)*	....	....	
61.7 *(46.0)*	2351	4.57 *(17.31)*	0.526 *(0.320)*	13.45 *(2.65)*	Relative humidity
135.9 *(101.4)*	2205	7.91 *(29.94)*	0.413 *(0.251)*	17.21 *(3.39)*	23%
31.1 *(23.2)*	2396	3.25 *(12.32)*	0.742 *(0.451)*	9.54 *(1.88)*	Barometer
90.5 *(67.5)*	2314	5.87 *(22.22)*	0.460 *(0.280)*	15.38 *(3.03)*	30.42" Hg *(102.7 kPa)*

Maximum Torque 356.2 lb. ft *(483.0 Nm)* @ 1660 RPM
Maximum Torque Rise 10%

DRAWBAR PERFORMANCE

Power Hp *(kW)*	Drawbar pull *(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)*
75% of Pull at Maximum Power—Five Hours 6th (H1M) Gear									
95.6 *(71.3)*	7981 *(35.5)*	4.49 *(7.23)*	2311	5.0	0.584 *(0.355)*	12.13 *(2.39)*	184 *(84)*	45 *(7)*	29.56 *(99.8)*
MAXIMUM POWER IN SELECTED GEARS									
4rd Gear (L2)									
105.0 *(78.3)*	14520 *(64.6)*	2.71 *(4.36)*	2246	15.0	0.562 *(0.341)*	12.59 *(2.48)*	189 *(87)*	55 *(13)*	29.65 *(100.1)*
5th Gear (L3M)									
115.3 *(86.0)*	12100 *(53.9)*	3.57 *(5.75)*	2201	10.0	0.502 *(0.305)*	14.11 *(2.78)*	189 *(87)*	54 *(12)*	29.65 *(100.1)*
6th Gear (H1M)									
117.3 *(87.5)*	10620 *(47.3)*	4.14 *(6.66)*	2204	8.2	0.495 *(0.301)*	14.26 *(2.81)*	188 *(86)*	54 *(12)*	29.65 *(100.1)*
7th Gear (L3)									
119.3 *(89.0)*	9070 *(40.4)*	4.93 *(7.94)*	2202	6.5	0.488 *(0.297)*	14.47 *(2.85)*	189 *(87)*	54 *(12)*	29.65 *(100.1)*
8th Gear (H1)									
121.4 *(90.5)*	7960 *(35.4)*	5.72 *(9.20)*	2210	5.5	0.479 *(0.291)*	14.77 *(2.91)*	188 *(86)*	54 *(12)*	29.65 *(100.1)*
9th Gear (H2M)									
119.2 *(88.9)*	6330 *(28.2)*	7.06 *(11.36)*	2204	4.0	0.485 *(0.295)*	14.57 *(2.87)*	188 *(86)*	54 *(12)*	29.65 *(100.1)*

Location of Test: National Institute of Agricultural Engineering, Wrest Park, Silsoe, Bedford, England MK45 4HS

Dates of Test: February to June 1984

Manufacturer: Zavody Tazkeho Strojarstva, Narodny Podnik, Box 03657, Martin, Czechoslovakia

FUEL AND OIL: Fuel No. 2 Diesel **Cetane No.** NA **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.8515 **Fuel weight** 7.08 lbs/gal *(0.849 kg/l)* **Oil SAE** 10W30 **Oil Consumption for 10 hours** 1.40 lb *(635 gm)* **Transmission lubricant** PP 80 API GL-4 **Front axle lubricant** SAE 80 API GL-4

ENGINE: Make Zetor Diesel **Type** six cylinder vertical with turbocharger **Serial No.** 000 002 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.3" × 4.7" *(110 mm × 120 mm)* **Compression ratio** 17 to 1 **Displacement** 417 cu in *(6842 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** oil bath with centrifugal precleaner **Oil filter** full flow centrifugal **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** two paper elements and sediment bowl **Muffler** vertical **Cooling medium temperature control** thermostat.

CHASSIS: Type four wheel drive **Serial No.** 100 003 **Tread width** rear 68" *(1725 mm)* to 74" *(1875 mm)* front 67" *(1700 mm)* to 71" *(1800 mm)* **Wheel base** 106.3" *(2700 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (2) range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 1.47 *(2.37)* second 1.97 *(3.17)* third 2.40 *(3.86)* fourth 3.21 *(5.17)* fifth 4.03 *(6.48)* sixth 4.62 *(7.43)* seventh 5.39 *(8.67)* eighth 6.18 *(9.94)* ninth 7.53 *(12.11)* tenth 10.06 *(16.19)* eleventh 12.62 *(20.31)* twelfth 16.88 *(27.16)* reverse 1.73 *(2.79)*, 2.32 *(3.73)*, 2.82 *(4.54)*, 3.77 *(6.07)*, 4.73 *(7.61)* 6.33 *(10.19)* **Clutch** single dry disc operated by foot pedal **Brakes** multiple dry disc hydraulically operated by two foot pedals which can be locked together **Steering** power assist **Power take-off** 540 rpm at 1890 engine rpm and 1000 rpm at 1920 engine rpm **Unladen tractor mass** 11243 lb *(5100 kg)*.

TRACTOR SOUND LEVEL WITH CAB	dB(A)
Maximum sound level	87.0
Bystander in 12th (H3) gear	90.0

CENTER OF GRAVITY

Horizontal distance forward from centerline of rear wheels	41.5″ in *(1053 mm)*
Vertical distance above roadway	38.0″ in *(964 mm)*
Horizontal distance from center of rear wheel tread 0″ to the right/left	

TURNING ON A CONCRETE SURFACE

Turning radius—with brake applied right 204″ *(5.17 m)* left 203″ *(5.15 m)*
—without brake right 239″ *(6.08 m)* left 234″ *(5.95 m)*
Turning space radius—with brake applied right 211″ *(5.35 m)* left 209″ *(5.32 m)*
—without brake right 246″ *(6.26 m)* left 241″ *(6.12 m)*

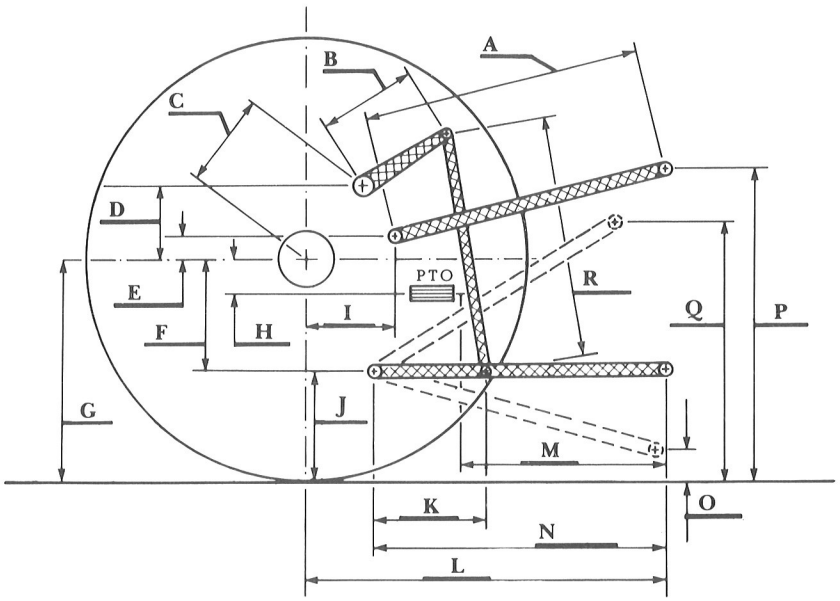
TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Two 18.4-38; 8; 13 *(90)*	Two 18.4-38; 8; 12 *(83)*
Ballast	—Liquid (total)	1623 lb *(736 kg)*	None
	—Cast Iron (total)	728 lb *(330 kg)*	None
Front Tires	—No., size, ply & psi *(kPa)*	Two 14.9-24; 8; 16 *(110)*	Two 14.9-24; 8; 12 *(83)*
Ballast	—Liquid (total)	None	None
	—Cast Iron (total)	966 lb *(438 kg)*	None
Height of Drawbar		15.6 in *(395 mm)*	16.1 in *(410 mm)*
Static Weight	—Rear	8960 lb *(4064 kg)*	6818 lb *(3093 kg)*
	—Front	5600 lb *(2540 kg)*	4424 lb *(2007 kg)*
	—Total	14560 lb *(6604 kg)*	11243 lb *(5100 kg)*

THREE POINT HITCH PERFORMANCE (STATIC TEST)

CATEGORY: III
Quick Attach: None

Maximum Force Exerted Through Whole Range:	7037 lbs	*(31.3 kN)*
i) Opening pressure of relief valve:	2320 psi	*(163 Bar)*
Sustained pressure of the open relief valve:	2740 psi	*(193 Bar)*
ii) Pump delivery rate at minimum pressure and rated engine speed:	12.2 GPM	*(46.3 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	9.0 GPM	*(34.0 l/min)*
Delivery pressure:	2320 psi	*(163 Bar)*
Power:	12.1 Hp	*(9.0 kW)*

HITCH DIMENSIONS AS TESTED—NO LOAD



Hitch Dimensions as Tested — No Load

	inch	*mm*
A	26.9	*683*
B	13.0	*330*
C	13.1	*333*
D	11.3	*286*
E	8.3	*210*
F	10.0	*255*
G	32.3	*820*
H	6.0	*153*
I	15.2	*385*
J	22.3	*565*
K	19.6	*498*
L	42.2	*1072*
M	22.1	*562*
N	37.1	*942*
O	12.1	*306*
P	44.3	*1125*
Q	39.3	*997*
R	22.0	*559*

REPAIRS AND ADJUSTMENTS: A new starter motor assembly was fitted to rectify a faulty switch and a torque multiplier brake band was replaced.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures.

The performance figures on this summary are taken from a test conducted under the OECD standard test code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **910,** Nebraska Summary 021, May 17, 1988.

LOUIS I. LEVITICUS
Engineer-in-Charge

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