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Test 1601: Zetor 6245, 6211, 4320 and 4340 Diesel 10-Speeds

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1601—ZETOR 6245 DIESEL ALSO ZETOR 6211 DIESEL ALSO ZETOR 4320 DIESEL AND 4340 DIESEL 10 SPEED

POWER TAKE-OFF PERFORMANCE

Power Hp (kW)	Crank shaft speed rpm	Fuel Consumption		Temperature °F (°C)				Barometer inch Hg (kPa)	
		gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cooling medium	Air wet bulb	Air dry bulb		
MAXIMUM POWER AND FUEL CONSUMPTION									
Rated Engine Speed — Two hours (PTO Speed — 596 rpm)									
53.09 (39.59)	2200	3.406 (12.894)	0.447 (0.272)	15.59 (3.070)	177 (80.5)	68 (20.0)	75 (23.8)	28.85 (97.42)	
Standard Power Take-off Speed (540 rpm) — One Hour									
50.23 (37.46)	1994	3.127 (11.838)	0.434 (0.264)	16.06 (3.164)	177 (80.6)	69 (20.6)	75 (24.0)	28.87 (97.49)	
VARYING POWER AND FUEL CONSUMPTION — Two Hours									
46.55 (34.71)	2270	2.994 (11.333)	0.449 (0.273)	15.55 (3.063)	175 (79.4) (.....)	77 (24.7) (.....)	
0.00 (0.00)	2401	1.002 (3.794) (.....) (.....)	172 (77.8) (.....)	76 (24.4) (.....)	
24.15 (18.01)	2357	1.897 (7.181)	0.548 (0.333)	12.73 (2.508)	173 (78.3)	67 (19.4)	77 (25.0) (.....)	
53.45 (39.86)	2200	3.377 (12.783)	0.441 (0.268)	15.83 (3.118)	177 (80.6)	69 (20.6)	77 (25.0) (.....)	
12.21 (9.10)	2379	1.493 (5.650)	0.853 (0.519)	8.18 (1.611)	173 (78.1)	71 (21.7)	78 (25.3) (.....)	
35.64 (26.58)	2317	2.430 (9.200)	0.476 (0.289)	14.66 (2.889)	174 (78.6)	70 (21.1)	79 (25.8) (.....)	
Av Av	28.67 (21.38)	2320	2.199 (8.324)	0.535 (0.325)	13.04 (2.568)	174 (78.8)	69 (20.7)	77 (25.0)	28.85 (97.43)

DRAWBAR PERFORMANCE (Front Wheel Drive Engaged)

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel gal/hr (l/h)	Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cool- ing med	Temp. °F (°C) Air wet bulb	Air dry bulb	Barom. inch Hg (kPa)
Maximum Available Power — Two Hours 7th(2H) Gear											
46.64 (34.78)	3138 (13.96)	5.57 (8.97)	2199	5.21	3.370 (12.756)	0.504 (0.306)	13.84 (2.727)	181 (82.5)	68 (19.7)	81 (26.9)	28.70 (96.90)
75% of Pull at Maximum Power — Ten Hours 7th(2H) Gear											
37.23 (27.76)	2361 (10.50)	5.91 (9.52)	2297	3.66	2.790 (10.563)	0.523 (0.318)	13.34 (2.628)	177 (80.4)	71 (21.7)	77 (24.8)	28.85 (97.41)
50% of Pull at Maximum Power — Two Hours 7th(2H) Gear											
25.57 (19.06)	1580 (7.03)	6.07 (9.77)	2337	2.87	2.223 (8.413)	0.606 (0.369)	11.50 (2.266)	176 (80.0)	69 (20.3)	71 (21.7)	28.88 (97.51)
50% of Pull at Reduced Engine Speed — Two Hours 8th(3H) Gear											
25.50 (19.02)	1577 (7.01)	6.07 (9.76)	1673	2.56	1.864 (7.056)	0.510 (0.310)	13.68 (2.695)	175 (79.2)	69 (20.6)	77 (25.0)	28.84 (97.39)
MAXIMUM POWER IN SELECTED GEARS											
40.65 (30.31)	6332 (28.16)	2.41 (3.87)	2257	14.83	4th(4L) Gear			178 (80.8)	68 (20.0)	71 (21.7)	28.69 (96.88)
45.21 (33.72)	4953 (22.03)	3.42 (5.51)	2198	9.28	5th(5L) Gear			180 (82.2)	70 (21.1)	74 (23.3)	28.85 (97.42)
46.84 (34.93)	4182 (18.60)	4.20 (6.76)	2201	7.05	6th(1H) Gear			177 (80.6)	67 (19.4)	67 (19.4)	28.89 (97.56)
47.43 (35.37)	3193 (14.20)	5.57 (8.97)	2199	5.17	7th(2H) Gear			181 (82.5)	67 (19.4)	79 (26.1)	28.70 (96.92)
45.84 (34.18)	2170 (9.65)	7.92 (12.75)	2202	3.36	8th(3H) Gear			179 (81.7)	69 (20.6)	75 (23.9)	28.87 (97.49)
LUGGING ABILITY IN 7th(2H) GEAR											
Crankshaft Speed rpm				2199	1987	1756	1543	1324	1105		
Pull—lbs (kN)				3193 (14.20)	3276 (14.57)	3353 (14.91)	3338 (14.85)	3321 (14.77)	3165 (14.08)		
Increase in Pull %				0	3	5	5	4	-1		
Power—Hp (kW)				47.43 (35.37)	43.98 (32.79)	39.73 (29.62)	34.70 (25.88)	29.64 (22.10)	23.64 (17.63)		
Speed—Mph (km/h)				5.57 (8.97)	5.03 (8.10)	4.44 (7.15)	3.90 (6.27)	3.35 (5.39)	2.80 (4.51)		
Slip %				5.17	5.24	5.24	5.24	5.37	5.11		

Department of Agricultural Engineering

Dates of Test: September 11 to 30, 1986

Manufacturer: AGROZET ZETOR Brno 63200, Czechoslovakia

FUEL, OIL AND TIME: Fuel No. 2 Diesel Cetane No. 49.5 (rating taken from oil company's inspection data) **Specific gravity converted to 60/60°F (15/15°C)** 0.8376 **Fuel weight** 6.974 lbs/gal (0.836 kg/l) **Oil** SAE 15W-40 **API service classification** CD-CC-SF-SE **To motor** 2.998 gal (11.347 l) **Drained from motor** 2.641 gal (9.999 l) **Transmission and final drive lubricant** SAE 80W gear lubricant **Total time engine was operated** 52.0 hours.

ENGINE: Make Zetor Diesel **Type** four cylinder vertical **Serial No.** *6201-007041*K **Crankshaft** lengthwise **Rated rpm** 2200 **Bore and stroke** 3.94" × 4.33" (100 mm × 110 mm) **Compression ratio** 17 to 1 **Displacement** 211 cu in (3456 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** oil bath with centrifugal precleaner **Air compressor** direct engine drive **Oil filter** full flow centrifugal **Fuel filter** two paper elements and sediment bowl **Muffler** vertical **Cooling medium** temperature control one thermostat.

CHASSIS: **Type** front wheel assist **Serial No.** 6245-007549 **Tread width** rear 56.1" (1425 mm) to 70.9" (1800 mm) front 59.4" (1510 mm) to 70.3" (1785 mm) **Wheel base** 87.5" (2222 mm) **Center of gravity** (without operator or ballast, with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 35.9" (911 mm) Vertical distance above roadway 36.3" (923 mm) Horizontal distance from center of rear wheel tread 0" (0 mm) to the right/left **Hydraulic control system** direct engine drive with throwout lever **Transmission** selective gear fixed ratio **Advised speeds mph (km/h)** first 1.1 (1.8) second 1.4 (2.3) third 2.0 (3.2) fourth 2.8 (4.5) fifth 3.9 (6.2) sixth 4.6 (7.4) seventh 6.0 (9.7) eighth 8.4 (13.5) ninth 11.9 (19.2) tenth 16.4 (26.4) reverse 1.5 (2.4), 6.2 (9.9) **Clutch** single dry disc operated by foot pedal **Brakes** drum and shoe hydraulically operated by two foot pedals which can be locked together **Steering** power assist **Turning radius** (on concrete surface with brake applied) right 165" (4.2 m) left 165" (4.2 m) (on concrete surface without brake) right 185" (4.7 m) left 185" (4.7 m) **Turning space diameter** (on concrete surface with brake applied) right 343" (8.7 m) left 343" (8.7 m) (on concrete surface without brake) right 390" (9.9 m) left 390" (9.9 m) **Power take-off** 540 rpm at 1994 engine rpm and 1000 rpm at 2050 engine rpm **Unladen tractor mass** 7475 lb (3391 kg).

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
Maximum Available Power—Two Hours	82.0	82.0
75% of Pull at Maximum Power—Ten Hours		82.0
50% of Pull at Maximum Power—Two Hours		82.0
50% of Pull at Reduced Engine Speed—Two Hours		79.5
Bystander in 10th (5H) gear	88.5	

DRAWBAR PERFORMANCE (Front Wheel Drive Disengaged)

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption			Temp. °F (°C)			Barom. inch Hg (kPa)
					gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Cool- ing med	Air wet bulb	Air dry bulb	
Maximum Available Power — Two Hours 7th(2H) Gear											
45.45 (33.89)	3182 (14.15)	5.36 (8.62)	2200	8.47	3.370 (12.756)	0.517 (0.314)	13.49 (2.657)	179 (81.4)	64 (17.8)	75 (23.9)	28.71 (96.95)
MAXIMUM POWER IN SELECTED GEARS											
40.73 (30.37)	4643 (20.65)	3.29 (5.30)	2258	14.72	5th(5L) Gear			177 (80.3)	67 (19.4)	73 (22.8)	28.70 (96.92)
46.10 (34.38)	3227 (14.35)	5.36 (8.62)	2198	8.32	7th(2H) Gear			178 (81.1)	64 (17.8)	74 (23.3)	28.71 (96.95)

TIRES, BALLAST AND WEIGHT

		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi (kPa)	Two 16.9-30; 8; 24 (170)	Two 16.9-30; 8; 24 (170)
Ballast	—Liquid (each)	None	None
	—Cast Iron (each)	375 lb (170 kg)	None
Front Tires	—No., size, ply & psi (kPa)	Two 11.2/10-24; 8; 24 (170)	Two 11.2/10-24; 8; 24 (170)
Ballast	—Liquid (each)	None	None
	—Cast Iron (each)	68 lb (31 kg)	None
Height of Drawbar		22.5 in (570 mm)	22.5 in (570 mm)
Static Weight with Operator —Rear		5315 lb (2411 kg)	4565 lb (2071 kg)
—Front		3220 lb (1460 kg)	3085 lb (1399 kg)
—Total		8535 lb (3871 kg)	7650 lb (3470 kg)

THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi (kPa)	2375 (16380)	
Location	remote outlet	
Hydraulic oil temperature °F (°C)	170 (77)	
Location	pump inlet	
	Maximum Lift Capacity	Lift Capacity for Transport
QUICK ATTACH	no	
CATEGORY	II	*not measured
LOAD lbs (kg)	4310 (1955)	
TIME sec	5.41	
HITCH POINT MOVEMENT in (mm)		
Lowest position	11.9 (302)	
Top of timed range	35.9 (912)	
Highest position	36.5 (927)	
LOAD CG MOVEMENT in (mm)		
Lowest position	11.8 (300)	
Top of timed range	38.1 (968)	
Highest position	38.9 (988)	

*Implement load capacity for transport purposes not specified by manufacturer.

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test codes and the technically equivalent ISO test codes or official Nebraska test procedure. For the maximum power tests, the fuel temperature at the injection pump was maintained at 146°F (63.3°C). Five gears were chosen between 15% slip and 10 mph (16.1 km/h).

NOTE: Report reissued. Supplemental permit for Zetor 4320 Diesel and 4340 Diesel, October 13, 1995.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1601**, October 31, 1986.

LOUIS I. LEVITICUS

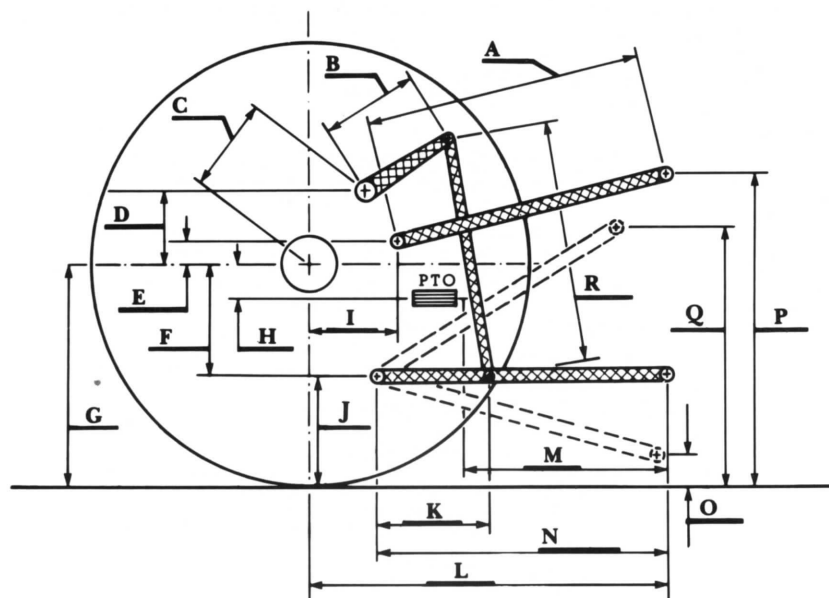
Engineer-in-Charge

L. L. BASHFORD

R.D. GRISSO, JR.

M.F. KOCHER

Board of Tractor Test Engineers



Hitch Dimensions as Tested — No Load

	inch	mm
A	25.3	641
B	12.6	320
C	14.3	364
D	14.3	363
E	12.7	323
F	5.4	138
G	27.8	706
H	0.3	7
I	11.3	288
J	22.4	568
K	15.8	401
L	37.0	940
M	26.7	677
N	33.8	857
O	8.0	203
P	41.4	1051
Q	36.1	918
R	20.5	521



Zetor 6245 Diesel