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Tests 1684 & 1730: Zetor 7341 Super/Zetor 7321 Super Diesel

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SUMMARY OF OECD TESTS 1684 and 1730—NEBRASKA SUMMARY 306
ZETOR 7341 SUPER DIESEL
ZETOR 7321 SUPER DIESEL
10 SPEED

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 1073 rpm)					
72.8 *(54.3)*	2200	4.40 *(16.67)*	0.426 *(0.259)*	16.55 *(3.26)*	
Standard Power Take-off speed (1000 rpm)					
72.4 *(54.0)*	2050	4.17 *(15.77)*	0.404 *(0.246)*	17.36 *(3.42)*	
VARYING POWER AND FUEL CONSUMPTION					
72.8 *(54.3)*	2200	4.40 *(16.67)*	0.426 *(0.259)*	16.55 *(3.26)*	Air temperature
63.2 *(47.1)*	2243	3.93 *(14.88)*	0.437 *(0.266)*	16.09 *(3.17)*	73°F *(23°C)*
48.3 *(36.0)*	2290	3.27 *(12.36)*	0.475 *(0.289)*	14.77 *(2.91)*	Relative humidity
33.0 *(24.6)*	2345	2.69 *(10.18)*	0.572 *(0.348)*	12.28 *(2.42)*	31%
16.8 *(12.5)*	2388	2.03 *(7.68)*	0.852 *(0.518)*	8.27 *(1.63)*	Barometer
-- --	2425	1.43 *(5.40)*	-- --	-- --	29.1" Hg *(98.6 kPa)*

Maximum Torque -221.1 lb.-ft. *(299.8 Nm)* at 1599 rpm
Maximum Torque Rise -27.1%
Torque rise at 1800 engine rpm -18%

DRAWBAR PERFORMANCE
BALLASTED - 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)*
75% of Pull at Maximum Power Five Hours 4th (4T) Gear									
42.6 *(31.8)*	5220 *(23.2)*	3.06 *(4.93)*	2235	4.1	0.547 *(0.333)*	12.84 *(2.53)*	176 *(80)*	66 *(19)*	28.9 *(97.9)*
MAXIMUM POWER IN SELECTED GEARS									
3rd (3T) Gear									
44.1 *(32.9)*	9890 *(44.0)*	1.67 *(2.69)*	2217	15.1	0.587 *(0.357)*	11.98 *(2.36)*	178 *(81)*	72 *(22)*	28.6 *(96.7)*
4th (4T) Gear									
54.6 *(40.7)*	6905 *(30.7)*	2.96 *(4.77)*	2196	5.5	0.518 *(0.315)*	13.60 *(2.68)*	178 *(81)*	72 *(22)*	28.6 *(96.7)*
5th (1R) Gear									
55.0 *(41.0)*	5125 *(22.8)*	4.02 *(6.47)*	2199	4.0	0.515 *(0.313)*	13.71 *(2.70)*	178 *(81)*	75 *(24)*	28.6 *(96.7)*
6th (5T) Gear									
52.7 *(39.3)*	4090 *(18.2)*	4.83 *(7.78)*	2201	3.0	0.539 *(0.328)*	13.04 *(2.57)*	174 *(79)*	77 *(25)*	28.6 *(96.7)*
7th (2R) Gear									
54.6 *(40.7)*	3595 *(16.0)*	5.69 *(9.15)*	2192	2.9	0.524 *(0.319)*	13.40 *(2.64)*	174 *(79)*	77 *(25)*	28.6 *(96.7)*
8th (3R) Gear									
51.2 *(38.2)*	2565 *(11.4)*	7.49 *(12.05)*	2196	1.9	0.554 *(0.337)*	12.69 *(2.50)*	172 *(78)*	77 *(25)*	28.6 *(96.7)*

Location of Test: SZZPLS, Tranovskeho 173, Praha 6-Repy, CZ

Dates of Test: March - November, 1997
Manufacturer: Zetor a.s., 632 00 Brno, Czech Republic

FUEL and OIL : Fuel No. 2 Diesel **Specific gravity converted to 60°/60° F *(15°/15°C)*** 0.844 **Fuel weight** 7.03 lbs/gal *(0.842 kg/l)* **Oil SAE** 15W40 **API service classification** CF-4/SG **Oil consumption for 10 hours** 0.06 lb *(28 gm)* **Transmission and hydraulic lubricant** SAE 80W90 GL-4 **Front axle lubricant** SAE 80W90 GL-4

ENGINE: Make Zetor Diesel **Type** four cylinder vertical with turbocharger **Serial No.** *004533* **Crankshaft** lengthwise **Rated Engine speed** 2200 **Bore and stroke** 4.016" x 4.724" *(102 mm x 120 mm)* **Compression ratio** 17 to 1 **Displacement** 239 cu in *(3922 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 **Fuel filter** one paper element **Muffler** vertical **Cooling medium temperature control** thermostat

CHASSIS: Type 2WD and front wheel assist **Serial No.** 001 003 **Tread width** rear 58.9" *(1495 mm)* to 70.7" *(1795 mm)* front: 2WD - 55.9" *(1420 mm)* to 70.7" *(1795 mm)*, FWA - 62.2" *(1580 mm)* to 71.3" *(1810 mm)* **Wheel base** 2WD - 88.9" *(2257 mm)* FWA 86.5" *(2198 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** (18.4R34 tires) first 1.06 *(1.70)* second 1.48 *(2.38)* third 1.92 *(3.09)* fourth 3.09 *(4.97)* fifth 4.12 *(6.63)* sixth 4.90 *(7.88)* seventh 5.78 *(9.30)* eighth 7.51 *(12.09)* ninth 12.06 *(19.42)* tenth 19.15 *(30.82)* reverse 1.16 *(1.86)*, 1.62 *(2.61)*, 2.11 *(3.39)*, 3.39 *(5.45)*, 4.52 *(7.28)*, 5.38 *(8.65)*, 6.34 *(10.20)*, 8.24 *(13.27)* **,** 13.24 *(21.32)*, 21.02 *(33.82)* **Clutch** single dry disc operated by foot pedal **Brakes** wet multiple disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1944 engine rpm or 1000 rpm at 2050 engine rpm **Unladen tractor mass** 7321 - 7265 lb *(3295 kg)*, 7341 - 7980 lb *(3620 kg)*

TRACTOR SOUND LEVEL WITH CAB	7321 dB(A)	7341 dB(A)
Maximum sound level	83.5	83.5
Bystander in 10th (5R) gear	84.0	88.5

CENTER OF GRAVITY - 7321

Horizontal distance forward from centerline of rear wheels	29.4" *(747 mm)*
Vertical distance above roadway	39.3" *(997 mm)*
Horizontal distance from center of rear wheel tread	0.5" *(13 mm)* to the right

CENTER OF GRAVITY - 7341

Horizontal distance forward from centerline of rear wheels	33.9" *(860 mm)*
Vertical distance above roadway	38.0" *(966 mm)*
Horizontal distance from center of rear wheel tread	0.6" *(16 mm)* to the right

TURNING ON A CONCRETE SURFACE (7321)

Turning radius with brake applied right 132" *(3.35 m)* left 134" *(3.40 m)*
without brake right 153" *(3.89 m)* left 154" *(3.90 m)*
Turning space radius with brake applied right 144" *(3.66 m)* left 145" *(3.69 m)*
without brake right 165" *(4.20 m)* left 165" *(4.20 m)*

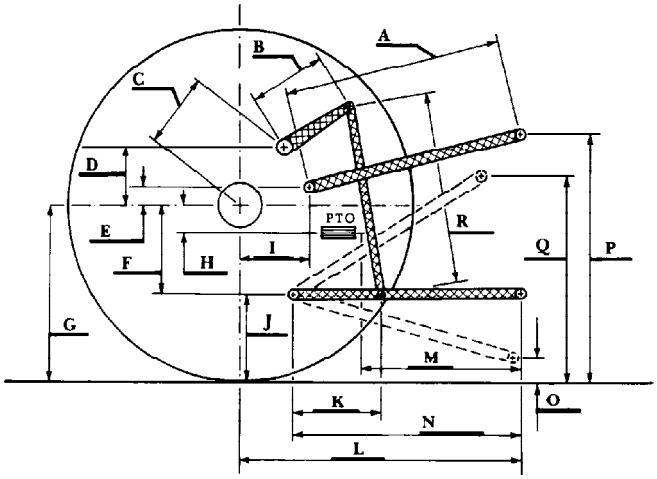
TURNING ON A CONCRETE SURFACE
7341 - Front Drive Disengaged

Turning radius - with brake applied right 157" *(3.99 m)* left 162" *(4.11 m)*
- without brake right 194" *(4.93 m)* left 190" *(4.82 m)*
Turning space radius - with brake applied right 166" *(4.22 m)* left 172" *(4.36 m)*
- without brake right 203" *(5.16 m)* left 200" *(5.07 m)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None

Maximum Force Exerted Through Whole Range:	3955 lbs	*(17.6 kN)* (at the frame)
	6185 lbs	*(27.5 kN)* (at lower link ends)
i) Opening pressure of relief valve:	NA	
Sustained pressure with relief valve open:	2610 psi	*(180 bar)*
ii) Pump delivery rate at minimum pressure:	11.4 GPM	*(43.2 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	10.3 GPM	*(39.0 l/min)*
Delivery pressure:	2350 psi	*(162 bar)*
Power:	14.1 HP	*(10.5 kW)*



	inch	*mm*
A	26.9	*682*
B	12.6	*320*
C	14.3	*364*
D	14.3	*363*
E	9.0	*229*
F	5.4	*138*
G	29.3	*745*
H	0.3	*7*
I	11.3	*288*
J	23.9	*607*
K	15.8	*402*
L	37.2	*944*
M	26.8	*681*
N	33.9	*861*
O	7.9	*200*
P	47.9	*1217*
Q	35.7	*906*
R	22.1	*561*

HITCH DIMENSIONS AS TESTED NO LOAD

Agricultural Research Division
Institute of Agriculture and Natural Resources
University of Nebraska Lincoln
Darrell Nelson, Dean and Director

DRAWBAR PERFORMANCE
BALLASTED - 2WD
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 cool-ing med	(°C) Air dry bulb	Barom. inch Hg *(kPa)*
75% of Pull at Maximum Power Five Hours 6th (5T) Gear									
42.4 *(31.6)*	3555 *(15.8)*	4.47 *(7.19)*	2261	8.4	0.561 *(0.341)*	12.48 *(2.46)*	183 *(84)*	48 *(9)*	28.7 *(97.3)*
MAXIMUM POWER IN SELECTED GEARS									
5th (1R) Gear									
50.6 *(37.7)*	5490 *(24.4)*	3.45 *(5.56)*	2240	15.1	0.541 *(0.329)*	12.94 *(2.55)*	183 *(84)*	66 *(19)*	29.1 *(98.6)*
6th (5T) Gear									
52.3 *(39.0)*	4720 *(21.0)*	4.16 *(6.69)*	2199	12.4	0.539 *(0.328)*	12.99 *(2.56)*	185 *(85)*	68 *(20)*	29.1 *(98.6)*
7th (2R) Gear									
55.7 *(41.5)*	4140 *(18.4)*	5.04 *(8.11)*	2201	10.1	0.506 *(0.308)*	13.81 *(2.72)*	185 *(85)*	68 *(19)*	29.1 *(98.6)*
8th (3R) Gear									
56.1 *(41.8)*	3100 *(13.8)*	6.78 *(10.91)*	2198	6.9	0.501 *(0.305)*	13.96 *(2.75)*	183 *(84)*	68 *(20)*	29.1 *(98.6)*
9th (4R) Gear									
52.4 *(39.1)*	1755 *(7.8)*	11.20 *(18.03)*	2201	4.3	0.536 *(0.326)*	13.05 *(2.57)*	185 *(85)*	68 *(20)*	29.1 *(98.6)*

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 manufacturer's claims of 14.0 GPM hydraulic flow nor lift force of 6830 lbs.The performance results on this summary were taken from OECD tests conducted under the Code I Test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Reports No. **1684** and **1730,** Nebraska Summary 306, May 24, 2000.

Brent T. Sampson
Test Engineer

L.L. Bashford
M.F. Kocher
R.D. Grisso Jr.
Board of Tractor Test Engineers

Zetor 7321

TIRES, BALLAST AND WEIGHT		**With Ballast**	**Without Ballast**
Rear Tires	--No., size, ply & psi *(kPa)*	Two 16.9-34;8;16 *(110)*	Two 16.9-34;8;19 *(130)*
Ballast	--Liquid (total)	1180 lb *(535 kg)*	None
	--Cast Iron (total)	595 lb *(270 kg)*	None
Front Tires	--No., size, ply & psi *(kPa)*	Two 7.50-20;6;26 *(180)*	Two 7.50-20; 6;23 *(160)*
Ballast	--Liquid (total)	None	None
	--Cast Iron (total)	805 lb *(365 kg)*	None
Height of Drawbar		19.2 in *(487 mm)*	19.2 in *(487 mm)*
Static Weight with Operator	- Rear	6560 lb *(2975 kg)*	4970 lb *(2255 kg)*
	- Front	3450 lb *(1565 kg)*	2460 lb *(1115 kg)*
	-Total	10010 lb *(4540 kg)*	7430 lb *(3370 kg)*

Zetor 7341

TIRES, BALLAST AND WEIGHT		**With Ballast**	**Without Ballast**
Rear Tires	--No., size, ply & psi *(kPa)*	Two 18.4R34; **;16 *(110)*	Two 18.4R34; **;16 *(110)*
Ballast	--Liquid (total)	1125 lb *(510 kg)*	None
	--Cast Iron (total)	595 lb *(270 kg)*	None
Front Tires	--No., size, ply & psi *(kPa)*	Two 13.6R24; **;19 *(130)*	Two 13.6R24; **;16 *(110)*
Ballast	--Liquid (total)	530 lb *(240 kg)*	None
	--Cast Iron (total)	730 lb *(330 kg)*	None
Height of Drawbar		18.6 in *(472 mm)*	18.6 in *(472 mm)*
Static Weight with Operator	- Rear	6505 lb *(2950 kg)*	4960 lb *(2250 kg)*
	-Front	4620 lb *(2095 kg)*	3185 lb *(1445 kg)*
	-Total	11125 lb *(5045 kg)*	8145 lb *(3695 kg)*