

SUMMARY OF OECD TEST 2509 — NEBRASKA SUMMARY 763

CASE IH FARMALL 90 DIESEL

12 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—614 rpm)					
72.7 (54.2)	2500	4.71 (17.84)	0.450 (0.274)	15.43 (3.04)	
Maximum Power - (1 hour)					
73.5 (54.8)	2450	4.67 (17.67)	0.443 (0.269)	15.73 (3.10)	
Standard Power Take-off Speed (540 rpm)					
70.3 (52.4)	2200	4.36 (16.49)	0.430 (0.262)	16.14 (3.18)	

VARYING POWER AND FUEL CONSUMPTION

72.7 (54.2)	2500	4.71 (17.84)	0.450 (0.274)	15.43 (3.04)	Air temperature
65.1 (48.5)	2632	4.60 (17.40)	0.490 (0.298)	14.16 (2.79)	79°F (26°C)
49.1 (36.6)	2649	3.89 (14.72)	0.549 (0.334)	12.64 (2.49)	Relative humidity
32.9 (24.5)	2659	3.18 (12.04)	0.672 (0.409)	10.34 (2.04)	26%
16.6 (12.4)	2690	2.23 (8.43)	0.929 (0.565)	7.48 (1.47)	Barometer
--	2720	1.72 (6.51)	--	--	27.2" Hg (92.2 kPa)

Maximum Torque - 248.0 lb.-ft. (336.2 Nm) at 1000 rpm
 Maximum Torque Rise - 62.3%
 Torque rise at 2000 engine rpm - 18%

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—7th (II-3) Gear									
65.2 (48.6)	4895 (21.77)	4.99 (8.04)	2502	6.5	0.478 (0.291)	14.57 (2.87)	138 (59)	90 (32)	27.1 (91.7)
75% of Pull at Maximum Power—7th (II-3) Gear									
53.5 (39.9)	3680 (16.37)	5.45 (8.78)	2677	4.5	0.545 (0.331)	12.79 (2.52)	149 (65)	90 (32)	27.1 (91.7)
50% of Pull at Maximum Power—7th (II-3) Gear									
36.3 (27.1)	2445 (10.88)	5.57 (8.96)	2701	3.4	0.666 (0.405)	10.46 (2.06)	154 (68)	90 (32)	27.1 (91.7)
75% of Pull at Reduced Engine Speed—10th (III-2) Gear									
53.8 (40.1)	3695 (16.43)	5.46 (8.79)	1546	4.5	0.434 (0.264)	16.04 (3.16)	156 (69)	91 (33)	27.1 (91.7)
50% of Pull at Reduced Engine Speed—10th (III-2) Gear									
36.5 (27.2)	2455 (10.92)	5.58 (8.98)	1562	3.5	0.501 (0.305)	13.91 (2.74)	158 (70)	91 (33)	27.1 (91.7)

Location of tests: DAEMTC (The Directorate of Agricultural Equipment and Testing Centre) Ankara, Turkey

Dates of tests: December 2008.

Manufacturer: Turk Traktor ve Ziraat Mak. A.S. Ankara, Turkey

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 15W40 API service classification** CH-4 **Transmission and hydraulic lubricant** Akcela **Nexlore fluid Frontaxle lubricant** Akcela **Nexlore fluid**

ENGINE: Make Iveco **Diesel Type** four cylinder vertical with turbocharger and air to air intercooler **Serial No.** 604976 **Crankshaft** lengthwise **Rated engine speed** 2500 **Bore and stroke** 4.094" x 5.196" (104.0 mm x 132.0 mm) **Compression ratio** 18.0 to 1 **Displacement** 274 cu in (4485 ml) **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: Type front wheel assist **Serial No.** Z8JP52437 **Tread width** rear 59.8" (1520 mm) to 87.8" (2230 mm) front 55.5" (1410 mm) to 82.3" (2090 mm) **Wheelbase** 91.8" (2332 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.07 (1.72) second 1.65 (2.66) third 2.24 (3.61) fourth 2.50 (4.03) fifth 3.22 (5.18) sixth 3.86 (6.21) seventh 5.24 (8.44) eighth 5.89 (9.48) ninth 7.51 (12.09) tenth 9.08 (14.61) eleventh 12.35 (19.87) twelfth 17.68 (28.46) reverse 1.05 (1.69), 1.62 (2.60), 2.20 (3.54), 2.45 (3.95), 3.15 (5.07), 3.78 (6.08), 5.14 (8.27), 5.77 (9.29), 7.36 (11.85), 8.90 (14.32), 12.10 (19.47), 17.34 (27.90) **Clutch** dual dry disc mechanically operated by foot pedal **Brakes** wet disc mechanically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2200 engine rpm or 1000 rpm at 2381 engine rpm **Unladen tractor mass** - 7825 lb (3550 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 (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
6th(II-2) Gear									
64.9 (48.4)	7265 (32.32)	3.35 (5.39)	2455	13.1	0.480 (0.292)	14.52 (2.86)	160 (71)	86 (30)	27.0 (91.6)
7th(II-3) Gear									
66.6 (49.7)	5185 (23.06)	4.82 (7.76)	2448	7.7	0.473 (0.288)	14.72 (2.90)	162 (72)	86 (30)	27.0 (91.6)
8th(III-1) Gear									
65.7 (49.0)	4460 (19.85)	5.52 (8.89)	2452	6.1	0.479 (0.291)	14.54 (2.86)	160 (71)	88 (31)	27.0 (91.6)
9th(II-4) Gear									
64.2 (47.9)	3340 (14.85)	7.21 (11.61)	2455	3.9	0.480 (0.292)	14.52 (2.86)	160 (71)	88 (31)	27.0 (91.6)
10th(III-2) Gear									
60.8 (45.3)	2585 (11.49)	8.82 (14.19)	2455	2.8	0.494 (0.300)	14.11 (2.78)	162 (72)	86 (30)	27.0 (91.6)

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 the manufacturer's three point lift claim of 5025 lbs. 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. **2509**, Nebraska Summary 763, July 19, 2011.

Roger M. Hoy
 Director

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 Board of Tractor Test Engineers

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th (3 II) gear	82.9	82.9
Bystander	--	--

TRACTOR SOUND LEVEL WITHOUT CAB	Front Wheel Drive	
	Engaged dB(A)	Disengaged dB(A)
At no load in 7th (3 II) gear	85.9	86.0
Bystander	--	--

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 18.4R30; **,16 (110)
 Two 320/85R24; **,16 (110)
 18.1 in (460 mm)
 4615 lb (2093 kg)
 3375 lb (1532 kg)
 7990 lb (3625 kg)

HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

Maximum force exerted through whole range: 3190 lbs (14.2 kN)

i) Sustained pressure of the open relief valve: 2755 psi (190 bar)

ii) Pump delivery rate at minimum pressure: 15.0 GPM (56.7 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 13.2 GPM (50.1 l/min)

Delivery pressure: 1885 psi (130 bar)

Power: 14.5 HP (10.9 kW)

HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	32.7	830
B	10.2	260
C	11.8	300
D	11.8	300
E	8.0	203
F	8.1	205
G	28.6	725
H	0.6	15
I	6.7	170
J	20.5	520
K	17.7	450
L	40.4	1025
M	27.6	700
N	38.2	970
O	7.9	200
P	44.5	1130
Q	37.2	945
R	25.0	635

