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1992

Nebraska Summary: S162 Ford 7740 12x12

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SUMMARY OF OECD TEST 1436—NEBRASKA SUMMARY 162
FORD NEW HOLLAND 7740 12× 12 DIESEL
12 SPEED

Location of Test: Silsoe Research Institute, Wrest Park, Silsoe Bedford, England MK45 4HS

Dates of Test: June to August, 1992

Manufacturer: FORD NEW HOLLAND LTD, Basildon, Essex, England

FUEL and OIL: Fuel No. 2 Diesel **Cetane No.** 54.5 **Specific gravity converted to 60°/60° F *(15°/15°C)*** 0.8400 **Fuel weight** 6.99 lbs/gal *(0.838 kg/l)* **Oil SAE** 15W40 **Oil consumption for 10 hours** NA **Transmission and hydraulic lubricant** SAE 80W **Front axle lubricant** SAE 80W

ENGINE: Make Ford New Holland Diesel **Type** four cylinder vertical with turbocharger **Serial No.** PA335116 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.4" × 5.0" *(111.8 mm × 127.0 mm)* **Compression ratio** 17.5 to 1 **Displacement** 304 cu in *(4987 ml)* **Starting system** 12 volt **Lubri-cation** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Fuel filter** two paper elements **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: Type front wheel assist **Serial No.** BD 05915 **Tread width** rear 64.1" *(1628 mm)* to 79.8" *(2028 mm)* front 54.8" *(1392 mm)* to 84.3" *(2142 mm)* **Wheel base** 93.0"*(2362 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** first 1.24 *(2.00)* second 1.81 *(2.91)* third 2.45 *(3.95)* fourth 2.81 *(4.53)* fifth 3.78 *(6.09)* sixth 4.10 *(6.60)* seventh 5.56 *(8.95)* eighth 6.20 *(9.98)* ninth 8.58 *(13.80)* tenth 9.03 *(14.53)* eleventh 12.26 *(19.73)* twelfth 18.89 *(30.40)* reverse 1.27 *(2.05)*, 1.86 *(2.99)*, 2.52 *(4.05)*, 2.89 *(4.65)*, 3.88 *(6.25)*, 4.20 *(6.76)*, 5.70 *(9.18)*, 6.37 *(10.25)*, 8.79 *(14.15)*, 9.26 *(14.91)*, 12.58 *(20.24)*, 19.38 *(31.19)* **Clutch** single dry disc operated by foot pedal **Brakes** multiple wet disc hydraulically actuated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1890 engine rpm and 1000 rpm at 2103 engine rpm (For US market—540 at 1890 rpm and 1000 at 2049 engine rpm) **Unladen tractor mass** 9675 lb *(4388 kg)*

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 claim of 17.4 gpm *(69 l/min)* hydraulic flow. The performance figures on this summary were taken from a test conducted under the OECD test Code II Restricted Standard Test Code procedure.

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—985 rpm)					
86.2 *(64.3)*	2071	4.98 *(18.87)*	0.404 *(0.246)*	17.31 *(3.41)*	
VARYING POWER AND FUEL CONSUMPTION					
86.2 *(64.3)*	2071	4.98 *(18.87)*	0.404 *(0.246)*	17.31 *(3.41)*	Air temperature
74.8 *(55.8)*	2113	4.56 *(17.28)*	0.426 *(0.259)*	16.40 *(3.23)*	73°F *(23°C)*
56.3 *(42.0)*	2131	3.75 *(14.20)*	0.465 *(0.283)*	15.02 *(2.96)*	Relative humidity
38.1 *(28.4)*	2149	3.02 *(11.42)*	0.552 *(0.336)*	12.66 *(2.49)*	62%
18.9 *(14.1)*	2155	2.19 *(8.29)*	0.810 *(0.493)*	8.63 *(1.70)*	Barometer
— —	2198	1.46 *(5.53)*	— —	— —	29.9" Hg *(101.2 kPa)*

Maximum Torque 276.0 lb.-ft. *(374.2 Nm)* at 1260 rpm
Maximum Torque Rise 26.3%
Torque rise at 1600 engine rpm—13%

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)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F (°C) cool-ing med	Temp.°F (°C) Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—8th (1H) Gear									
73.6 *(54.9)*	4585 *(20.4)*	6.02 *(9.69)*	2068	3.9	0.478 *(0.291)*	14.62 *(2.88)*	183 *(84)*	75 *(24)*	29.8 *(101.0)*
75% of Pull at Maximum Power—8th (1H) Gear									
57.0 *(42.5)*	3435 *(15.3)*	6.22 *(10.01)*	2117	3.0	0.519 *(0.316)*	13.46 *(2.65)*	180 *(82)*	79 *(26)*	29.8 *(100.9)*
50% of Pull at Maximum Power—8th (1H) Gear									
38.1 *(28.4)*	2260 *(10.1)*	6.32 *(10.17)*	2132	2.2	0.635 *(0.386)*	11.01 *(2.17)*	181 *(83)*	79 *(26)*	29.8 *(100.9)*
75% of Pull at Reduced Engine Speed—9th (4M) Gear									
56.9 *(42.5)*	3425 *(15.2)*	6.23 *(10.03)*	1537	3.0	0.441 *(0.268)*	15.87 *(3.13)*	181 *(83)*	81 *(27)*	29.8 *(100.9)*
50% of Pull at Reduced Engine Speed—9th (4M) Gear									
37.7 *(28.1)*	2240 *(10.0)*	6.31 *(10.15)*	1541	2.1	0.493 *(0.300)*	14.16 *(2.79)*	178 *(81)*	81 *(27)*	29.8 *(100.9)*

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)*	Hp.hr/gal *(kW.h/l)*	Temp.°F (°C) cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
				4th (1M) Gear					
64.0 *(47.7)*	9665 *(43.0)*	2.48 *(3.99)*	2104	14.3	0.538 *(0.327)*	12.99 *(2.56)*	180 *(82)*	70 *(21)*	29.8 *(101.0)*
				5th (4L) Gear					
73.0 *(54.4)*	7665 *(34.1)*	3.57 *(5.74)*	2073	6.8	0.483 *(0.294)*	14.47 *(2.85)*	183 *(84)*	77 *(25)*	29.8 *(101.0)*
				6th (2M) Gear					
72.4 *(54.0)*	6915 *(30.8)*	3.93 *(6.32)*	2079	5.6	0.488 *(0.297)*	14.31 *(2.82)*	181 *(83)*	68 *(20)*	29.8 *(101.0)*
				7th (3M) Gear					
72.4 *(54.0)*	5015 *(22.3)*	5.47 *(8.70)*	2073	3.9	0.493 *(0.300)*	14.21 *(2.80)*	180 *(82)*	66 *(19)*	29.8 *(101.0)*
				8th (1H) Gear					
73.6 *(54.9)*	4585 *(20.4)*	6.02 *(9.69)*	2068	3.9	0.478 *(0.291)*	14.62 *(2.88)*	183 *(84)*	75 *(24)*	29.8 *(101.0)*
				9th (4M) Gear					
71.6 *(53.4)*	3180 *(14.2)*	8.44 *(13.58)*	2077	2.7	0.493 *(0.300)*	14.18 *(2.79)*	181 *(83)*	75 *(24)*	29.8 *(101.0)*

TRACTOR SOUND LEVEL WITH CAB	**dB(A)**
Gear closest to 4.7 mph *(7.5 km/h)* 6th (2M) gear	77.0
Maximum sound level—6th (2M) gear	77.0
Transport speed—no load—12th (4H) gear	76.0
Bystander	—

TIRES, BALLAST AND WEIGHT		**With Ballast**	**Without Ballast**
Rear Tires	—No., size, ply & psi *(kPa)*	Two 18.4R38; **; 12 *(83)*	Two 18.4R38; **; 12 *(83)*
Ballast	—Liquid (total)	None	None
	—Cast Iron (total)	665 lb *(302 kg)*	None
Front Tires	—No., size, ply & psi *(kPa)*	Two 14.9R28; **; 12 *(83)*	Two 14.9R28; **; 12 *(83)*
Ballast	—Liquid (total)	None	None
	—Cast Iron (total)	710 lb *(323 kg)*	None
Height of Drawbar		17.3 in *(440 mm)*	18.5 in *(470 mm)*
Static Weight with Operator	—Rear	6345 lb *(2879 kg)*	5850 lb *(2654 kg)*
	—Front	4870 lb *(2209 kg)*	3990 lb *(1809 kg)*
	—Total	11215 lb *(5088 kg)*	9840 lb *(4463 kg)*

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1436**, Nebraska Summary 162, October 3, 1994.

LOUIS I. LEVITICUS
Engineer-in-Charge

R.D. GRISSO
M.F. KOCHER
K. VON BARGEN
Board of Tractor Test Engineers

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)*
Maximum Power—6th (2M) Gear									
74.2 *(55.3)*	7020 *(31.2)*	3.96 *(6.38)*	2080	4.6	0.478 *(0.291)*	14.62 *(2.88)*	183 *(84)*	61 *(16)*	30.1 *(101.8)*
75% of Pull at Maximum Power—6th (2M) Gear									
58.9 *(43.9)*	5305 *(23.6)*	4.16 *(6.69)*	2160	3.6	0.526 *(0.320)*	13.27 *(2.61)*	180 *(82)*	66 *(19)*	30.0 *(101.7)*
50% of Pull at Maximum Power—6th (2M) Gear									
40.0 *(29.8)*	3540 *(15.8)*	4.24 *(6.82)*	2177	2.6	0.620 *(0.377)*	11.27 *(2.22)*	180 *(82)*	66 *(19)*	30.0 *(101.7)*
75% of Pull at Reduced Engine Speed—7th (3M) Gear									
58.7 *(43.8)*	5295 *(23.6)*	4.16 *(6.70)*	1592	3.6	0.444 *(0.270)*	15.76 *(3.11)*	178 *(81)*	66 *(19)*	30.0 *(101.7)*
50% of Pull at Reduced Engine Speed—7th (3M) Gear									
39.7 *(29.6)*	3520 *(15.7)*	4.23 *(6.80)*	1600	2.6	0.487 *(0.296)*	14.37 *(2.83)*	176 *(80)*	66 *(19)*	30.0 *(101.7)*

MAXIMUM POWER IN SELECTED GEARS

3rd (3L) Gear									
65.8 *(49.1)*	11375 *(50.6)*	2.17 *(3.49)*	2137	15.1	0.546 *(0.332)*	12.79 *(2.52)*	187 *(86)*	64 *(18)*	30.0 *(101.7)*
4th (1M) Gear									
73.2 *(54.6)*	10510 *(46.8)*	2.61 *(4.21)*	2087	8.8	0.490 *(0.298)*	14.26 *(2.81)*	181 *(83)*	66 *(19)*	30.1 *(101.8)*
5th (4L) Gear									
74.6 *(55.6)*	7710 *(34.3)*	3.63 *(5.84)*	2072	5.1	0.477 *(0.290)*	14.67 *(2.89)*	181 *(83)*	66 *(19)*	30.0 *(101.7)*
6th (2M) Gear									
74.2 *(55.3)*	7020 *(31.2)*	3.96 *(6.38)*	2080	4.6	0.478 *(0.291)*	14.62 *(2.88)*	183 *(84)*	61 *(16)*	30.1 *(101.8)*
7th (3M) Gear									
73.4 *(54.7)*	5070 *(22.5)*	5.43 *(8.73)*	2074	3.5	0.483 *(0.294)*	14.47 *(2.85)*	183 *(84)*	66 *(19)*	30.1 *(101.8)*
8th (1H) Gear									
74.0 *(55.2)*	4575 *(20.3)*	6.07 *(9.77)*	2076	3.3	0.480 *(0.292)*	14.57 *(2.87)*	181 *(83)*	66 *(19)*	30.0 *(101.7)*
9th (4M) Gear									
71.1 *(53.0)*	3145 *(14.0)*	8.48 *(13.64)*	2081	2.6	0.501 *(0.305)*	13.96 *(2.75)*	180 *(82)*	66 *(19)*	30.0 *(101.7)*

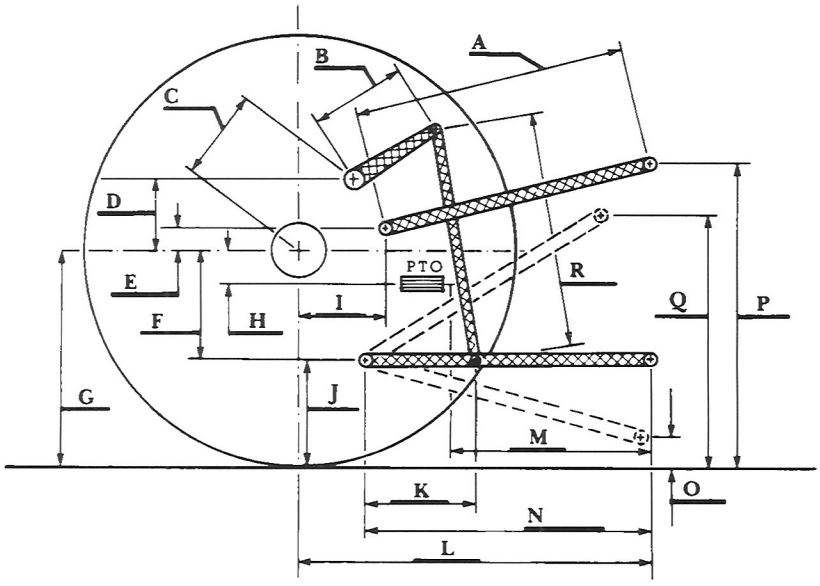
SUPPLEMENTARY TESTS WITH 540 RPM PTO SHAFT
POWER TAKE-OFF PERFORMANCE

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—593 rpm)					
86.1 *(64.2)*	2075	4.97 *(18.83)*	0.404 *(0.246)*	17.31 *(3.41)*	
Standard Power Take-off speed (541 rpm)					
83.0 *(61.9)*	1894	4.55 *(17.23)*	0.383 *(0.233)*	18.25 *(3.59)*	
VARYING POWER AND FUEL CONSUMPTION					
86.1 *(64.2)*	2075	4.97 *(18.83)*	0.404 *(0.246)*	17.31 *(3.41)*	Air temperature
74.3 *(55.4)*	2107	4.54 *(17.20)*	0.427 *(0.260)*	16.37 *(3.22)*	73°F *(23°C)*
56.4 *(42.1)*	2135	3.74 *(14.14)*	0.464 *(0.282)*	15.08 *(2.97)*	Relative humidity
37.5 *(28.0)*	2144	3.00 *(11.38)*	0.559 *(0.340)*	12.51 *(2.46)*	54%
19.2 *(14.3)*	2172	2.19 *(8.29)*	0.799 *(0.486)*	8.73 *(1.72)*	Barometer
— —	2198	1.45 *(5.49)*	— —	— —	29.9" Hg *(101.3 kPa)*

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None

Maximum Force Exerted Through Whole Range:	6225 lbs	*(27.7 kN)*		
i) Opening pressure of relief valve:	NA			
Sustained pressure with relief valve open:	2640 psi	*(182 bar)*		
ii) Pump delivery rate at minimum pressure and rated engine speed:	At auxiliary service connection		At remote hydraulic port	
	9.6 GPM	*(36.4 l/min)*	15.1 GPM	*(57.3 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	7.6 GPM	*(28.7 l/min)*	12.5 GPM	*(47.5 l/min)*
Delivery pressure:	2465 psi	*(170 bar)*	2465 psi	*(170 bar)*
Power:	10.9 HP	*(8.1 kW)*	18.1 HP	*(13.5 kW)*



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	*mm*
A	28.5	*725*
B	10.0	*254*
C	14.0	*356*
D	13.4	*341*
E	5.9	*149*
F	9.0	*229*
G	32.3	*820*
H	1.9	*47*
I	12.8	*325*
J	23.3	*591*
K	18.3	*466*
L	40.0	*1017*
M	22.0	*560*
N	36.0	*915*
O	7.9	*200*
P	47.3	*1201*
Q	33.9	*860*
R	32.5	*825*

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