January 1977

Test 1254: International 886 Diesel

Nebraska Tractor Test Lab
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NEBRASKA TRACTOR TEST 1254 — INTERNATIONAL 886 DIESEL

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)	Temperature °F (°C) Cooling medium	Air wet bulb	Air dry bulb	Barometer inch Hg (kPa)
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—1159 rpm)								
86.14 (64.24)	2400	6.258 (23.689)	0.504 (0.307)	13.77 (2.712)	192 (89.1)	59 (14.9)	75 (23.8)	28.993 (97.906)
Standard Power Take-off Speed (1000 rpm)—One Hour								
83.16 (62.02)	2071	5.819 (22.029)	0.486 (0.296)	14.29 (2.815)	195 (90.4)	59 (14.8)	74 (23.5)	28.970 (97.827)
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
76.69 (57.19)	2518	5.763 (21.816)	0.522 (0.317)	13.31 (2.621)	190 (87.8)	60 (15.3)	76 (24.7)	....
0.00 (0.00)	2670	2.506 (9.485)	....	....	182 (83.6)	60 (15.3)	76 (24.2)	....
40.01 (29.84)	2616	4.052 (15.340)	0.703 (0.428)	9.87 (1.945)	186 (85.3)	60 (15.3)	74 (23.6)	....
86.10 (64.20)	2400	6.269 (23.730)	0.506 (0.308)	13.73 (2.706)	192 (89.2)	58 (14.7)	74 (23.6)	....
20.08 (14.97)	2646	3.262 (12.347)	1.128 (0.686)	6.16 (1.212)	183 (83.9)	58 (14.4)	74 (23.6)	....
58.68 (43.76)	2566	4.830 (18.284)	0.572 (0.348)	12.15 (2.393)	188 (86.7)	59 (15.0)	75 (23.9)	....
Av 46.93	**2569**	**4.447**	**0.658**	**10.55**	**187**	**59**	**75**	**28.953**
Av (34.99)		***(16.834)***	***(0.400)***	***(2.079)***	***(86.1)***	***(15.0)***	***(23.9)***	***(97.771)***

DRAWBAR PERFORMANCE

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank-shaft speed rpm	Slip %	Fuel Consumption gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) Cool-ing med	Air wet bulb	Air dry bulb	Barom. inch Hg (kPa)
Maximum Available Power—Two Hours 9th (4LoDD) Gear											
73.07 (54.49)	5108 (22.72)	5.36 (8.63)	2401	4.54	6.210 (23.509)	0.590 (0.359)	11.77 (2.318)	188 (86.7)	59 (14.7)	68 (20.0)	28.840 (97.388)
75% of Pull at Maximum Power—Ten Hours 9th (4LoDD) Gear											
59.58 (44.43)	3903 (17.36)	5.72 (9.21)	2529	3.32	5.458 (20.661)	0.636 (0.387)	10.92 (2.151)	186 (85.4)	66 (18.7)	74 (23.2)	28.652 (96.754)
50% of Pull at Maximum Power—Two Hours 9th (4LoDD) Gear											
40.95 (30.54)	2592 (11.53)	5.92 (9.53)	2589	2.14	4.446 (16.831)	0.754 (0.459)	9.21 (1.814)	184 (84.2)	62 (16.4)	74 (23.3)	28.790 (97.220)
50% of Pull at Reduced Engine Speed—Two Hours 12th (2 HiDD) Gear											
40.61 (30.28)	2571 (11.44)	5.92 (9.53)	1714	2.22	3.312 (12.538)	0.566 (0.344)	12.26 (2.415)	183 (83.9)	62 (16.4)	73 (22.5)	28.775 (97.169)
MAXIMUM POWER IN SELECTED GEARS											
60.44 (45.07)	10485 (46.64)	2.16 (3.48)	2511	14.86	4th (2LoDD) Gear			184 (84.2)	53 (11.7)	55 (12.8)	28.930 (97.692)
74.02 (55.20)	6750 (30.02)	4.11 (6.62)	2399	6.07	7th (4LoTA) Gear			188 (86.4)	56 (13.3)	62 (16.7)	28.870 (97.490)
76.16 (56.79)	6075 (27.02)	4.70 (7.56)	2400	5.37	8th (1HiTA) Gear			187 (86.1)	53 (11.7)	59 (15.0)	28.860 (97.456)
74.33 (55.43)	5203 (23.15)	5.36 (8.62)	2400	4.65	9th (4LoDD) Gear			187 (86.1)	54 (12.2)	60 (15.6)	28.860 (97.456)
75.67 (56.43)	4468 (19.88)	6.35 (10.22)	2401	3.93	11th (2HiTA) Gear			187 (85.8)	56 (13.3)	63 (17.2)	28.870 (97.490)
73.59 (54.87)	3354 (14.92)	8.23 (13.24)	2401	3.04	12th (2HiDD) Gear			187 (85.8)	57 (13.9)	64 (17.8)	28.870 (97.490)

Department of Agricultural Engineering

Dates of Test: September 15 to 23, 1977

Manufacturer: INTERNATIONAL HARVESTER COMPANY, 401 North Michigan Avenue, Chicago, IL 60611.

FUEL, OIL AND TIME: Fuel No. 2 Diesel **Cetane No.** 50.8 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60° *(15°/15°)*** 0.8340 **Fuel weight** 6.944 lbs/gal *(0.834 kg/l)* **Oil SAE** 30 **API service classification** CA/CD-SC/SE **To motor** 3.019 gal *(11.428 l)* **Drained from motor** 1.955 gal *(7.400 l)* **Transmission and final drive lubricant** I.H. Hy-Tran Fluid **Total time engine was operated** 42.5 hours

ENGINE Make International Diesel **Type** 6 cylinder vertical **Serial No.** 360T2U014325 **Crankshaft** lengthwise **Rated rpm** 2400 **Bore and stroke** 3.875" × 5.085" *(98.4 mm × 129.2 mm)* **Compression ratio** 17 to 1 **Displacement** 360 cu in *(5896 ml)* **Cranking system** 12 volt **Lubrication** pressure **Air cleaner** primary and safety paper elements with dust unloader **Oil filter** two full flow spin-on cartridges **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil **Fuel filter** primary and final paper spin-on cartridges **Muffler** underhood **Cooling medium temperature control** thermostat

CHASSIS: Type standard with duals **Serial No.** 2490189U010605* **Tread width** rear 60" *(1524 mm)* to 104" *(2642 mm)* front 60" *(1524 mm)* to 84" *(2134 mm)* **Wheel base** 104.8" *(2662 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 29.4" *(747 mm)* Vertical distance above roadway 40.0" *(1016 mm)* Horizontal distance from center of rear wheel tread 0" *(0 mm)* to the right/left **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (2) range operator controlled power shift **Advertised speeds mph *(km/h)*** first 1.4 *(2.2)* second 1.8 *(2.8)* third 1.8 *(3.0)* fourth 2.4 *(3.8)* fifth 3.2 *(5.1)* sixth 4.1 *(6.6)* seventh 4.2 *(6.8)* eighth 4.8 *(7.8)* ninth 5.4 *(8.8)* tenth 6.2 *(10.0)* eleventh 6.4 *(10.3)* twelfth 8.2 *(13.2)* thirteenth 11.1 *(17.9)* fourteenth 14.3 *(23.0)* fifteenth 14.9 *(23.9)* sixteenth 19.1 *(30.7)* reverse 2.4 *(3.8)*, 3.0 *(4.9)*, 3.2 *(5.1)*, 4.0 *(6.5)*, 5.5 *(8.8)*, 7.0 *(11.3)*, 7.3 *(11.7)*, 9.4 *(15.1)* **Clutch** single dry disc power actuated and operated by foot pedal **Brakes** multiple wet disc power actuated and operated by foot pedals which can be locked together **Steering** hydrostatic **Turning radius** (on concrete surface with brake applied) right 138" *(3.51 m)* left 138" *(3.51 m)* (on concrete surface without brake) right 175" *(4.44 m)* left 175" *(4.44*

LUGGING ABILITY IN RATED GEAR 9th (4LoDD)

Crankshaft Speed rpm	2400	2163	1922	1679	1440	1200
Pull—lbs *(kN)*	5203 *(23.15)*	5749 *(25.57)*	6164 *(27.42)*	6562 *(29.19)*	6535 *(29.07)*	6285 *(27.96)*
Increase in Pull %	0	10	18	26	26	21
Power—Hp *(kW)*	74.33 *(55.43)*	73.65 *(54.92)*	69.92 *(52.14)*	64.66 *(48.22)*	55.25 *(41.20)*	44.34 *(33.07)*
Speed—Mph *(km/h)*	5.36 *(8.62)*	4.80 *(7.73)*	4.25 *(6.85)*	3.70 *(5.95)*	3.17 *(5.10)*	2.65 *(4.26)*
Slip %	4.65	5.08	5.51	5.93	5.93	5.79

TRACTOR SOUND LEVEL WITH CAB	dB(A)
Maximum Available Power—Two Hours	80.0
75% of Pull at Maximum Power—Ten Hours	81.0
50% of Pull at Maximum Power—Two Hours	81.0
50% of Pull at Reduced Engine Speed—Two Hours	79.0
Bystander in 15th (4 HiTA) gear	90.0

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Four 18.4-34; 6; 12 *(80)*	Four 18.4-34; 6; 12 *(80)*
Ballast	—Liquid (each inner)	375 lb *(170 kg)*	None
	—Cast Iron (each)	50 lb *(23 kg)*	None
Front Tires	—No., size, ply & psi *(kPa)*	Two 9.5L-15; 6; 36 *(250)*	Two 9.5L-15; 6; 36 *(250)*
Ballast	—Liquid (each)	None	None
	—Cast Iron (each)	10 lb *(5 kg)*	None
Height of drawbar		19 in *(480 mm)*	19 in *(480 mm)*
Static weight with operator—rear		9640 lb *(4373 kg)*	8690 lb *(3942 kg)*
front		3400 lb *(1542 kg)*	3380 lb *(1533 kg)*
total		13040 lb *(5915 kg)*	12070 lb *(5475 kg)*

m) **Turning space diameter** (on concrete surface with brake applied) right 286″ *(7.26 m)* left 286″ *(7.26 m)* (on concrete surface without brake) right 360″ *(9.14 m)* left 360″ *(9.14 m)* **Power take-off** 1000 rpm at 2071 engine rpm and 540 rpm at 2106.

REPAIRS and ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure. Temperature at injection pump return was 162°F *(72.3°C)*. Six gears were chosen between 15% slip and 15 mph *(24.1 km/h)* During final inspection slight pitting of the engine exhaust valve faces was noted.

We, the undersigned, certify that this is a true and correct report of official Tractor Test **1254.**

LOUIS I. LEVITICUS
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International 886 Diesel

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