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Test 1486: White Farm Equipment-Iseki 2-75 Diesel 16-Speed

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1486

WHITE FARM EQUIPMENT-ISEKI 2-75 DIESEL

16 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—1074 rpm)									
75.39 (56.22)	2200	4.903 (18.560)	0.456 (0.277)	15.38 (3.029)	186 (85.8)	70 (21.4)	75 (23.8)	29.000 (97.929)	
Standard Power Take-off Speed (1000 rpm)—One Hour									
75.64 (56.40)	2050	4.769 (18.053)	0.442 (0.269)	15.86 (3.124)	186 (85.6)	70 (21.3)	75 (24.1)	29.005 (97.946)	
VARYING POWER AND FUEL CONSUMPTION—Two Hours									
66.60 (49.66)	2288	4.558 (17.254)	0.480 (0.292)	14.61 (2.878)	186 (85.6)	70 (21.4)	77 (25.0)	..... .....
0.00 (0.00)	2389	1.643 (6.219)	..... .....	..... .....	184 (84.7)	70 (21.4)	76 (24.4)	..... .....
33.86 (25.25)	2326	3.000 (11.356)	0.621 (0.378)	11.29 (2.223)	186 (85.6)	70 (21.4)	76 (24.4)	..... .....
75.11 (56.01)	2200	4.887 (18.499)	0.456 (0.278)	15.37 (3.028)	187 (86.1)	71 (21.7)	78 (25.6)	..... .....
17.12 (12.77)	2350	2.345 (8.877)	0.960 (0.584)	7.30 (1.439)	184 (84.4)	71 (21.7)	77 (25.0)	..... .....
50.34 (37.54)	2304	3.779 (14.305)	0.526 (0.320)	13.32 (2.624)	186 (85.6)	72 (22.2)	80 (26.4)	..... .....
Av Av	40.51 (30.21)	2310	3.369 (12.753)	0.583 (0.355)	12.02 (2.369)	186 (85.3)	71 (21.6)	77 (25.2)	29.005 (97.946)

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 13th (HL4) Gear											
63.58 (47.41)	3958 (17.60)	6.02 (9.70)	2198	7.43	4.886 (18.495)	0.539 (0.328)	13.01 (2.563)	190 (87.8)	74 (23.3)	81 (27.2)	28.990 (97.895)
75% of Pull at Maximum Power—Ten Hours 13th (HL4) Gear											
52.18 (38.91)	3032 (13.49)	6.45 (10.39)	2302	5.28	4.272 (16.173)	0.574 (0.349)	12.21 (2.406)	191 (88.1)	74 (23.3)	87 (30.7)	28.922 (97.665)
50% of Pull at Maximum Power—Two Hours 13th (HL4) Gear											
35.69 (26.61)	2021 (8.99)	6.62 (10.66)	2324	3.68	3.406 (12.893)	0.669 (0.407)	10.48 (2.064)	190 (87.8)	71 (21.4)	75 (23.9)	28.830 (97.355)
50% of Pull at Reduced Engine Speed—Two Hours 15th (HH3) Gear											
35.75 (26.66)	2022 (8.99)	6.63 (10.67)	1498	3.47	2.586 (9.788)	0.507 (0.308)	13.82 (2.723)	188 (86.4)	74 (23.3)	81 (27.2)	28.875 (97.507)
MAXIMUM POWER IN SELECTED GEARS											
55.85 (41.65)	6487 (28.86)	3.23 (5.20)	2287	14.95	10th (HL2) Gear			190 (87.8)	70 (21.1)	74 (23.3)	28.850 (97.422)
62.13 (46.33)	6163 (27.41)	3.78 (6.08)	2200	13.34	11th (HL3) Gear			190 (87.8)	69 (20.6)	73 (22.8)	28.840 (97.388)
63.39 (47.27)	5376 (23.91)	4.42 (7.12)	2200	11.32	12th (HH1) Gear			190 (87.8)	73 (22.8)	79 (26.1)	28.960 (97.794)
65.05 (48.51)	4042 (17.98)	6.04 (9.71)	2199	7.30	13th (HL4) Gear			190 (87.8)	75 (23.9)	78 (25.6)	28.950 (97.760)
64.96 (48.44)	3050 (13.57)	7.99 (12.85)	2200	5.52	14th (HH2) Gear			190 (87.8)	73 (22.8)	78 (25.6)	28.960 (97.794)
64.28 (47.93)	2501 (11.13)	9.64 (15.51)	2198	4.44	15th (HH3) Gear			190 (87.8)	69 (20.6)	73 (22.8)	28.830 (97.355)

Department of Agricultural Engineering

Dates of Test: August 22 to September 1, 1983

Manufacturer: ISEKI AND COMPANY, LTD.,
2-6 Kioicho Chiyoda-Ku Tokyo, Japan 102

FUEL, OIL AND TIME: Fuel No. 2 Diesel
Cetane No. 47.0 (rating taken from oil company's
inspection data) **Specific gravity converted to 60°/**
60° (15°/15°) 0.8419 **Fuel weight** 7.010 lbs/gal
(0.840 kg/l) **Oil** White Farm Equipment Company
Supreme Blend **SAE 30 API service classifica-**
tion CC-CD, SD-SF **To motor** 3.575 gal (13.531 l)
Drained from motor 3.311 gal (12.534 l) **Trans-**
mission and final drive lubricant White Farm
Equipment Company Universal fluid **Total time**
engine was operated 38.0 hours.

ENGINE: Make Isuzu Diesel **Model** 6BB1
Type six cylinder vertical **Serial No.** 520592
Crankshaft lengthwise **Rated rpm** 2200 **Bore**
and stroke 4.016" × 4.33" (102 mm × 110 mm)
Compression ratio 17.5 to 1 **Displacement** 329
cu in (5393 ml) **Starting system** 12 volt **Lubrica-**
tion pressure **Air cleaner** two paper elements
Oil filter one full flow element **Oil cooler** engine
coolant heat exchanger for crankcase oil **Fuel fil-**
ter two paper elements with sediment bowl and
screen **Muffler** vertical **Cooling medium**
temperature control one thermostat.

CHASSIS: **Type** front wheel assist **Serial No.**
00288 M **Tread width** rear 59.0" (1500 mm) to
79.1" (2010 mm) front 61.4" (1560 mm) **Wheel**
base 92.1" (2340 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 34.8" (885 mm) Vertical distance above
roadway 30.9" (784 mm) Horizontal distance from
center of rear wheel tread 0.1" (3 mm) to the left
Hydraulic control system direct engine drive
Transmission selective gear fixed ratio **Adver-**
tised speeds mph (km/h) first 0.4 (0.7) second 0.7
(1.1) third 0.8 (1.3) fourth 0.9 (1.5) fifth 1.2 (2.0)
sixth 1.6 (2.6) seventh 1.9 (3.1) eighth 2.2 (3.5)
ninth 2.8 (4.5) tenth 3.7 (5.9) eleventh 4.4 (7.1)
twelfth 5.0 (8.0) thirteenth 6.5 (10.5) fourteenth
8.4 (13.5) fifteenth 10.1 (16.2) sixteenth 14.9
(24.0) reverse 0.5 (0.8), 1.2 (2.0), 2.6 (4.2), 6.5
(10.5) **Clutch** single dry disc operated by foot
pedal **Brakes** multiple wet disc operated by two
foot pedals which can be locked together and
hand lever **Steering** power assist **Turning radius**
(on concrete surface with brake applied) right
135" (3.43 m) left 135" (3.43 m) (on concrete sur-
face without brake) right 188" (4.78 m) left 188"
(4.78 m) **Turning space diameter** (on concrete
surface with brake applied) right 280" (7.11 m) left
280" (7.11 m) (on concrete surface without brake)
right 386" (9.80 m) left 386" (9.80 m) **Power take-**
off 540 rpm at 1813 engine rpm and 1000 rpm at
2050 engine rpm.

LUGGING ABILITY IN 13th (HL4) GEAR

Crankshaft Speed rpm	2199	1980	1755	1540	1313	1095
Pull—lbs (kN)	4042 (17.98)	4478 (19.92)	4861 (21.62)	5084 (22.61)	5018 (22.32)	4947 (22.01)
Increase in Pull %	0	11	20	26	24	22
Power—Hp (kW)	65.05 (48.51)	64.22 (47.89)	61.07 (45.54)	55.59 (41.45)	46.80 (34.90)	38.52 (28.73)
Speed—Mph (km/h)	6.04 (9.71)	5.38 (8.65)	4.71 (7.58)	4.10 (6.60)	3.50 (5.63)	2.92 (4.70)
Slip %	7.30	8.26	9.38	10.12	10.00	9.88

TRACTOR SOUND LEVEL WITHOUT CAB	dB(A)	Front Wheel Drive Disengaged dB(A)
Maximum Available Power—Two Hours	94.5	94.5
75% of Pull at Maximum Power—Ten Hours		95.0
50% of Pull at Maximum Power—Two Hours		95.0
50% of Pull at Reduced Engine Speed—Two Hours		92.0
Bystander in 16th (HH4) gear		84.5

DRAWBAR PERFORMANCE (Front Wheel Drive Engaged)

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 13th (HL4) Gear											
64.07 (47.78)	3863 (17.18)	6.22 (10.01)	2199	5.28	4.904 (18.563)	0.536 (0.326)	13.07 (2.574)	191 (88.1)	75 (23.6)	83 (28.1)	28.995 (97.912)

MAXIMUM POWER IN SELECTED GEARS

54.43 (40.59)	8028 (35.71)	2.54 (4.09)	2294	14.83	9th (LH4) Gear			191 (88.1)	70 (21.1)	75 (23.9)	28.860 (97.456)
64.79 (48.32)	3907 (17.38)	6.22 (10.01)	2200	5.42	13th (HL4) Gear			189 (87.2)	75 (23.9)	79 (26.1)	28.950 (97.760)

TIRES, BALLAST AND WEIGHT

		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi (kPa)	Two 16.9-34; 6; 16 (110)	Two 16.9-34; 6; 16 (110)
Ballast	—Liquid (each)	473 lb (214 kg)	None
	—Cast Iron (each)	350 lb (159 kg)	None
Front Tires	—No., size, ply & psi (kPa)	Two 11.2-24; 6; 20 (140)	Two 11.2-24; 6; 20 (140)
Ballast	—Liquid (each)	None	None
	—Cast Iron (each)	30 lb (14 kg)	None
Height of Drawbar		19 in (485 mm)	19 in (485 mm)
Static Weight with Operator—Rear		6625 lb (3005 kg)	4980 lb (2259 kg)
—Front		3000 lb (1361 kg)	2940 lb (1334 kg)
—Total		9625 lb (4366 kg)	7920 lb (3593 kg)

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 or official Nebraska test procedure. For the maximum power tests, the fuel temperature at the injection pump was maintained at 150°F (65.6°C). Six gears were chosen between 15% slip and 10 mph (16.1 km/h).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1486.

LOUIS I. LEVITICUS

Engineer-in-Charge

K. VON BARGEN

W. E. SPLINTER

L. L. BASHFORD

Board of Tractor Test Engineers



White Farm Equipment-Iseki 2-75 Diesel

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