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January 1973

Test 1126: International 464 Gasoline

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1126 – INTERNATIONAL 464 GASOLINE

POWER TAKE-OFF PERFORMANCE

Hp	Crank- shaft speed rpm	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Temperature Cooling medium	Degrees F Air wet bulb	Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—605 rpm)								
45.74	2400	4.405	0.594	10.38	188	62	75	29.040
Standard Power Take-off Speed (540 rpm)—One Hour								
43.64	2142	4.040	0.571	10.80	188	62	75	29.045
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
41.13	2537	4.187	0.628	9.82	179	61	75	.....
0.00	2601	1.663	.....	.....	172	61	75	.....
20.79	2564	2.801	0.831	7.42	178	61	75	.....
46.08	2399	4.386	0.587	10.51	186	62	76	.....
10.41	2569	2.237	1.326	4.65	175	61	75	.....
30.85	2537	3.385	0.677	9.11	178	61	75	.....
Av 24.88	2534	3.110	0.771	8.00	178	61	75	.....

DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Temp Cool- ing med	Degrees F Air wet bulb	Air dry bulb	Barometer inches of Mercury
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—3rd Gear (3 Lo)											
41.06	3423	4.50	2387	5.94	4.255	0.639	9.65	180	61	73	28.965
75% of Pull at Maximum Power—Ten Hours—3rd Gear (3 Lo)											
33.87	2646	4.80	2525	5.15	3.821	0.695	8.86	176	52	52	28.532
50% of Pull at Maximum Power—Two Hours—3rd Gear (3 Lo)											
24.65	1871	4.94	2555	3.54	3.201	0.801	7.70	175	55	56	28.590
50% of Pull at Reduced Engine Speed—Two Hours—5th Gear (1 Hi)											
24.37	1838	4.97	1530	3.30	2.654	0.671	9.18	175	54	56	28.635

MAXIMUM POWER WITH BALLAST

29.54	5465	2.03	2568	12.39	1st Gear (1 Lo)	.....	175	49	63	29.000
39.07	4508	3.25	2399	8.71	2nd Gear (2 Lo)	.....	176	54	62	29.010
42.20	3506	4.51	2399	6.20	3rd Gear (3 Lo)	.....	178	57	66	29.000
40.41	2556	5.93	2398	4.19	4th Gear (4 Lo)	.....	176	57	66	29.000
41.72	2003	7.81	2399	3.06	5th Gear (1 Hi)	.....	179	59	74	28.990
38.65	1123	12.90	2400	1.23	6th Gear (2 Hi)	.....	178	59	74	28.990

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—3rd Gear (3 Lo)

Pounds Pull	3506	3734	3871	3908	3918	4043	3815
Horsepower	42.20	40.21	36.81	32.68	28.16	24.10	18.36
Crankshaft Speed rpm	2399	2156	1911	1682	1446	1203	967
Miles Per Hour	4.51	4.04	3.57	3.14	2.70	2.24	1.81
Slip of Drivers %	6.20	6.53	6.86	7.09	6.98	7.31	6.98

TRACTOR SOUND LEVEL

	dB (A)
Maximum Available Power 2 Hours	95.0
75% of Pull at Max. Power 10 Hours	95.0
50% of Pull at Max. Power 2 Hours	93.5
50% of Pull at Reduced Engine Speed 2 Hours	91.5
Bystander 8th gear (4 Hi)	81.0

TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear Tires	—No, size, ply & psi	Two 14.9-28;6;16
Ballast	—Liquid	680 lb each
	Cast Iron	550 lb each
Front Tires	—No, size, ply & psi	Two 6.50-16;4;20
Ballast	—Liquid	None
	Cast Iron	None
Height of drawbar	13 inches	13½ inches
Static weight with operator—Rear	5660 lb	3200 lb
	Front	1695 lb
	Total	7355 lb
		4895 lb

Department of Agricultural Engineering

Dates of Test: April 27 to May 17, 1973

Manufacturer: INTERNATIONAL HARVESTER COMPANY, CHICAGO ILLINOIS

FUEL, OIL AND TIME Fuel Lead free gasoline Octane No Motor 82.7 Research 91.6 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.7410 Weight per gallon 6.169 lb Oil SAE 30 API service classification I.H. Low ash engine oil SAE 30 recommended or API service classification CD and CC To motor 1.475 gal Drained from motor 1.051 gal Transmission and final drive lubricant Hy-Tran fluid Total time engine was operated 46 hours

ENGINE Make International gasoline Type 4 cylinder vertical Serial No 175CT2U002740* Crankshaft mounted lengthwise Rated rpm 2400 rpm Bore and stroke 3.562" x 4.390" Compression ratio 7.19 to 1 Displacement 175 cu in Carburetor size 1" Ignition system battery Cranking system 12 volt electric Lubrication pressure Air cleaner dual stage dry type with replaceable pleated paper element and automatic dust unloader Oil filter full flow treated paper screw-on cartridge Oil cooler radiator for transmission and hydraulic fluid Fuel filter Screen in sediment bowl Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type standard Serial No 2210146U100098* Tread width rear 52" to 76" front 48" to 80" Wheel base 75.2" 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 26.3" Vertical distance above roadway 29.6" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph first 2 second 3½ third 4¾ fourth 6¼ fifth 8 sixth 13 seventh 17¾ eighth 22¾ reverse 2¾, 4½, 6 and 7¾ Clutch single plate dry disc operated by foot pedal Brakes wet single disc hydraulically power actuated by two foot pedals that can be locked together with automatic equalizing Steering hydrostatic Turning radius (on concrete surface with brake applied) right 110" left 110" (on concrete surface without brake) right 124" left 124" Turning space diameter (on concrete surface with brake applied) right 231" left 231" (on concrete surface without brake) right 259" left 259" Power take-off 605 rpm at 2400 engine rpm.

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.

Pull in 1st gear was limited by the tire tangential pull factor. Seventh and eighth gears were not run as test procedure requires only six travel speeds.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1126.

L. F. LARSEN

Engineer-in-charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station
E. F. Frolik, Dean; H. W. Ottoson, Director; Lincoln, Nebraska