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Test 1045: International Farmall 826 Diesel (Also International 826 Diesel)

Nebraska Tractor Test Lab
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NEBRASKA TRACTOR TEST 1045 – INTERNATIONAL FARMALL 826 DIESEL (ALSO INTERNATIONAL 826 DIESEL)

POWER TAKE-OFF PERFORMANCE

Hp	Crank-shaft speed rpm	Fuel Consumption Gal per hr	Fuel Consumption Lb per hp-hr	Hp-hr per gal	Temperature Degrees F Cooling medium	Air wet bulb	Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—1159 rpm)								
92.19	2400	6.196	0.466	14.88	191	60	75	28.950
Standard Power Take-off Speed (1000 rpm)—One Hour								
85.34	2072	5.536	0.450	15.42	191	61	75	28.960
VARYING POWER AND FUEL CONSUMPTION—TWO HOURS								
81.41	2494	5.595	0.477	14.55	187	62	75	.....
0.00	2639	2.054	.....	.....	182	62	74	.....
42.05	2578	3.758	0.620	11.19	186	62	75	.....
92.31	2400	6.196	0.466	14.90	191	62	75	.....
21.29	2609	2.919	0.951	7.29	183	62	75	.....
62.43	2551	4.661	0.518	13.39	187	62	75	.....
Av 49.92	**2545**	**4.197**	**0.583**	**11.89**	**186**	**62**	**75**	**28.960**

DRAWBAR PERFORMANCE

Hp	Draw-bar pull lbs	Speed miles per hr	Crank-shaft speed rpm	Slip of drivers %	Fuel Consumption Gal per hr	Fuel Consumption Lb per hp-hr	Hp-hr per gal	Temp Degrees F Cool-ing med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—8th Gear (1st Hi TA)											
78.92	6723	4.40	2403	7.04	6.187	0.544	12.76	184	67	86	28.850
75% of Pull at Maximum Power—Ten Hours—8th Gear (1st Hi TA)											
64.67	5160	4.70	2519	5.24	5.248	0.563	12.32	185	69	81	28.697
50% of Pull at Maximum Power—Two Hours—8th Gear (1st Hi TA)											
44.56	3461	4.83	2549	3.96	4.225	0.658	10.55	178	75	82	28.700
MAXIMUM POWER WITH BALLAST											
72.93	9631	2.84	2461	11.52	5th Gear (3rd Low TA)			184	66	83	28.920
77.27	7890	3.67	2401	8.47	6th Gear (3rd Low DD)			184	65	79	28.940
80.75	6884	4.40	2404	7.07	8th Gear (1st Hi TA)			182	62	75	28.940
79.05	5911	5.01	2394	5.91	9th Gear (4th Low DD)			185	63	76	28.940
81.13	5288	5.75	2399	5.20	10th Gear (1st Hi DD)			183	64	78	28.940
81.80	5126	5.98	2401	4.99	11th Gear (2nd Hi TA)			180	62	75	28.940
79.20	3821	7.77	2400	3.70	12th Gear (2nd Hi DD)			185	64	79	28.940
78.81	2775	10.65	2405	2.59	13th Gear (3rd Hi TA)			185	65	81	28.930
MAXIMUM PULL WITHOUT BALLAST											
60.41	8183	2.77	2482	14.95	5th Gear (3rd Low TA)			177	64	78	28.940

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST
8th Gear (1st Hi-TA)

Pounds Pull	6884	7157	7693	7986	8141	7924
Horsepower	80.75	74.89	71.08	64.42	56.52	45.58
Crankshaft Speed rpm	2404	2152	1912	1679	1450	1197
Miles Per Hour	4.40	3.92	3.46	3.03	2.60	2.16
Slip of Drivers %	7.07	7.54	8.21	8.61	9.00	8.61

TIRES, BALLAST and WEIGHT		With Ballast	Without Ballast
Rear tires	—No, size, ply & psi	Two 18.4-34; 8; 20	Two 18.4-34; 8; 16
Ballast	—Liquid	1405 lb each	None
	Cast iron	560 lb each	None
Front tires	—No, size, ply & psi	Two 9.5L-15; 6; 28	Two 9.5L-15; 6; 28
Ballast	—Liquid	None	None
	Cast iron	25 lb each	None
Height of drawbar		21 inches	22½ inches
Static weight with operator—Rear		11180 lb	7250 lb
	Front	2660 lb	2610 lb
	Total	13840 lb	9860 lb

Department of Agricultural Engineering

Dates of Test: June 3 to June 27, 1970

Manufacturer: INTERNATIONAL HARVESTER COMPANY, CHICAGO, ILLINOIS

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°** 0.8332 **Weight per gallon** 6.938 lb **Oil** SAE 30 **API service classification** MS, DG, DM, DS **To motor** 2.875 gal **Drained from motor** 2.231 gal **Transmission and final-drive lubricant** SAE IH Hy-Tran fluid **Total time engine was operated** 41 hours.

ENGINE **Make** International Diesel **Type** 6 cylinder vertical **Serial No** 358DT2DO11500 **Crankshaft mounted** lengthwise **Rated rpm** 2400 **Bore and stroke** 3.875" x 5.06" **Compression ratio** 16 to 1 **Displacement** 358 cu in **Cranking system** 12 volt electric **Lubrication** pressure **Air cleaner** dry type two stage with replaceable pleated paper element with automatic dust unloader **Oil filter** full flow spin on paper cartridge **Oil cooler** engine coolant heat exchanger for engine oil and radiator for transmission and hydraulic oil **Fuel filter** one primary and one final replaceable spin on treated paper cartridges **Muffler** was used **Cooling medium temperature control** thermostat.

CHASSIS **Type** tricycle **Serial No** 2510132-U008713 **Tread width** rear 60" to 94" front 8" and 16" **Wheel base** 101.2" **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 27.5" Vertical distance above roadway 38.8" Horizontal distance from center of rear wheel tread 0" to the right/left **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial range operator controlled power shifting **Advertised speeds mph** first 1¼ second 1⅝ third 1¾ fourth 2¼ fifth 3 sixth 4 seventh 4⅛ eighth 4¾ ninth 5¼ tenth 6 eleventh 6¼ twelfth 8 thirteenth 10¾ fourteenth 13¾ fifteenth 14¼ sixteenth 18¼ reverse 2¼, 2⅞, 3, 4, 6¼, 7, 9 **Clutch** single plate dry disc operated by foot pedal **Brakes** dry disc hydraulically power actuated by two foot pedals which can be locked together with automatic equalizing **Steering** hydrostatic power **Turning radius** (on concrete surface with brake applied) right 117" left 117" (on concrete surface without brake) right 123" left 123" **Turning space diameter** (on concrete surface with brake applied) right 243" left 243" (on concrete surface without brake) right 256" left 256" **Belt pulley** 1158 rpm at 2400 engine rpm diam 11" face 7½" **Belt speed** 3170 fpm **Power take-off** 539 or 1014 rpm at 2100 engine rpm.

REPAIRS and ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with the SAE and ASAE test code. First, second, third, and fourth gears were not run as it was necessary to limit the pull in fifth gear because of the stability formula. Seventh, fourteenth, fifteenth, and sixteenth gears were not run as test procedure requires only eight gears.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1045.

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