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Test 1080: International Farmall 1466 Turbo Diesel

Nebraska Tractor Test Lab
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NEBRASKA TRACTOR TEST 1080 – INTERNATIONAL FARMALL 1466 TURBO 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	Temperature Degrees F Air wet bulb	Temperature Degrees F Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—1159 rpm)								
133.40	2400	8.365	0.437	15.95	176	61	75	29.137
Standard Power Take-off Speed (1000 rpm)—One Hour								
125.17	2071	7.423	0.414	16.86	180	62	77	29.135
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
118.02	2504	7.902	0.467	14.94	177	63	79	.....
0.00	2637	2.934	.....	.....	159	61	77	.....
60.99	2577	5.291	0.605	11.53	169	62	79	.....
133.37	2400	8.384	0.438	15.91	180	63	80	.....
30.91	2612	4.147	0.936	7.45	164	63	80	.....
90.05	2542	6.569	0.509	13.71	172	64	81	.....
Av 72.22	**2545**	**5.871**	**0.567**	**12.30**	**170**	**63**	**79**	**29.097**

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	Temp Degrees F Air wet bulb	Temp Degrees F Air dry bulb	Barometer inches of Mercury
VARYING POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—8th Gear (1 Hi TA)											
115.74	8637	5.02	2404	5.77	8.316	0.501	13.92	172	50	58	28.800
75% of Pull at Maximum Power—Ten Hours—8th Gear (1 Hi TA)											
93.98	6589	5.35	2512	3.96	7.316	0.542	12.85	175	64	79	28.761
50% of Pull at Maximum Power—Two Hours—8th Gear (1 Hi TA)											
64.65	4392	5.52	2562	2.86	5.896	0.636	10.96	166	48	60	28.615
50% of Pull at Reduced Engine Speed—Two Hours—12th Gear (2 Hi DD)											
63.90	4371	5.48	1490	2.66	4.391	0.479	14.55	169	57	75	28.610
MAXIMUM POWER WITH BALLAST											
110.14	13165	3.14	2410	11.12	5th Gear (3Lo TA)			169	54	67	28.830
113.88	9782	4.37	2399	6.99	7th Gear (4Lo TA)			163	51	60	28.910
116.97	8793	4.99	2399	6.33	8th Gear (1Hi TA)			170	53	64	28.900
116.71	7680	5.70	2399	5.20	9th Gear (4Lo DD)			170	53	65	28.870
118.07	6787	6.52	2401	4.51	10th Gear (1Hi DD)			172	54	66	28.870
119.14	6593	6.78	2402	4.28	11th Gear (2Hi TA)			172	54	68	28.870
MAXIMUM PULL WITHOUT BALLAST											
99.75	11969	3.13	2494	14.90	5th Gear (3Lo TA)			170	51	61	29.010

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

Pounds Pull	8793	9692	10306	11011	11349	11179
Horsepower	116.97	114.64	107.61	99.24	87.69	72.44
Crankshaft Speed rpm	2399	2148	1908	1659	1430	1198
Miles Per Hour	4.99	4.44	3.92	3.38	2.90	2.43
Slip of Drivers %	6.33	6.77	7.50	8.08	8.65	8.51

TRACTOR SOUND LEVEL (with Deluxe Cab)	**dB(A)**
Maximum Available Power 2 Hours	88.5
75% of Pull at Max. Power 10 Hours	87.0
50% of Pull at Max. Power 2 Hours	87.5
50% of Pull at Reduced Engine Speed 2 Hours	85.0
Bystander 16th gear (4Hi DD)	85.5

TIRES, BALLAST and WEIGHT		**With Ballast**	**Without Ballast**
Rear tires	—No, size, ply & psi	Four 18.4-38; 8; 16	Four 18.4-38; 8; 16
Ballast	—Liquid	670 lb each	None
	Cast iron	None	None
Front tires	—No, size, ply & psi	Two 11L-15; 6; 28	Two 11L-15; 6; 28
Ballast	—Liquid	None	None
	Cast iron	35 lb each	None
Height of drawbar		22 inches	22½ inches
Static weight with operator—rear		12740 lb	10060 lb
front		3490 lb	3420 lb
total		16230 lb	13480 lb

Department of Agricultural Engineering

Date of Test: October 2 to October 19, 1971

Manufacturer: International Harvester Company, Chicago, Illinois

FUEL, OIL and TIME Fuel No. 2 Diesel **Cetane No** 53.5 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60°** 0.8376 **Weight per gallon** 6.974 lb **Oil SAE** 30 **API service classification** MS, DM, DS **To motor** 4.512 gal **Drained from motor** 3.415 gal **Transmission and final drive lubricant** IH Hy-Tran fluid **Total time engine was operated** 47 hours.

ENGINE Make International Diesel **Type** 6 cylinder vertical with turbo-charger **Serial No** 436TT2U001224* **Crankshaft Mounted** lengthwise **Rated rpm** 2400 **Bore and stroke** 4.30″ x 5.00″ **Compression ratio** 16 to 1 **Displacement** 436 cu in **Cranking system** 12 volt electric **Lubrication** pressure **Air cleaner** two stage dry type using replaceable pleated paper elements and automatic dust unloader **Oil filter** full flow with two replaceable screw-on cartridges **Oil Cooler** engine coolant heat exchanger for engine oil and radiator for transmission and hydraulic oil **Fuel filter** one primary and one final using replaceable screw-on cartridges **Muffler** was used **Cooling medium temperature control** thermostat.

CHASSIS Type standard **Serial No** 2650114-U008200* **Tread width** rear 60″ to 100″ front 62″ to 86″ **Wheel base** 104.8″ **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 27.3″ Vertical distance above roadway 40.3″ 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 1½ second 1⅞ third 2 fourth 2½ fifth 3½ sixth 4¼ seventh 4½ eighth 5¼ ninth 5¾ tenth 6½ eleventh 6¾ twelfth 8¾ thirteenth 11¾ fourteenth 15¼ fifteenth 15¾ sixteenth 20¼ reverse 2½, 3¼, 3⅜, 4¼, 5¾, 7½, 7¾, 10 **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 equalization **Steering** hydrostatic **Turning radius** (on concrete surface with brake applied) right 140″ left 140″ (on concrete surface without brake) right 173″ left 173″ **Turning space diameter** (on concrete surface with brake applied) right 292″ left 292″ (on concrete surface without brake) right 361″ left 361″ **Power take-off** 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 SAE and ASAE test code or official Nebraska test procedure. 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. Sixth, twelfth, thirteenth, fourteenth, fifteenth and sixteenth 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 1080.

L. F. LARSEN
Engineer-in-Charge

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