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January 1972

Test 1117: International Farmall 766 Diesel 16-Speed (Chassis S/N 2490180U009000 and up)

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1117 — INTERNATIONAL FARMALL 766 DIESEL 16 SPEED

CHASSIS SN 2490180U009000* and up

POWER TAKE-OFF PERFORMANCE

Hp	Crank- shaft speed rpm	Fuel Consumption Gal per hr	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—1146 rpm)								
85.45	2600	6.161	0.500	13.87	182	53	75	29.140
Standard Power Take-off Speed (1000 rpm)—One Hour								
85.66	2269	5.767	0.467	14.85	184	54	75	29.140
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
74.61	2673	5.623	0.523	13.27	178	54	76	.....
0.00	2843	2.587	.....	.....	169	53	73	.....
38.52	2761	4.048	0.729	9.52	172	55	75	.....
85.47	2599	6.155	0.499	13.89	183	54	76	.....
19.71	2804	3.356	1.181	5.87	171	54	74	.....
57.07	2720	4.818	0.586	11.85	174	56	75	.....
Av 45.90	2733	4.431	0.670	10.36	174	54	75	29.140

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 Degrees F Cool- ing med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
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VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST

Maximum Available Power—Two Hours—8th Gear (1 Hi TA)											
73.37	5755	4.78	2597	6.28	6.073	0.574	12.08	157	33	38	28.840
75% of Pull at Maximum Power—Ten Hours—8th Gear (1 Hi TA)											
59.25	4377	5.08	2713	4.75	5.363	0.627	11.05	163	31	34	29.241
50% of Pull at Maximum Power—Two Hours—8th Gear (1 Hi TA)											
41.77	2975	5.26	2762	2.98	4.577	0.759	9.13	165	27	29	29.190
50% of Pull at Reduced Engine Speed—Two Hours—12th Gear (2 Hi DD)											
41.77	2977	5.26	1618	3.01	3.280	0.545	12.73	170	31	34	29.200

MAXIMUM POWER WITH BALLAST

54.65	9236	2.22	2708	14.58	4th Gear (2 Lo DD)	165	39	43	28.760
71.99	6469	4.17	2600	7.34	7th Gear (4 Lo TA)	167	39	43	28.760
74.36	5831	4.78	2599	6.32	8th Gear (1 Hi TA)	167	41	45	28.760
73.16	5021	5.46	2599	5.35	9th Gear (4 Lo DD)	168	41	45	28.760
74.54	4312	6.48	2598	4.50	11th Gear (2 Hi TA)	167	41	45	28.760
73.58	3273	8.43	2601	3.20	12th Gear (2 Hi DD)	168	40	42	28.760

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

Pounds Pull	5831	6511	7132	7509	7533	7478
Horsepower	74.36	73.85	71.24	64.79	55.54	45.82
Crankshaft Speed rpm	2599	2335	2075	1809	1546	1283
Miles Per Hour	4.78	4.25	3.75	3.24	2.76	2.30
Slip of Drivers %	6.32	7.34	8.27	9.05	9.05	8.91

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
Maximum Available Power 2 Hours	89.0
75% of Pull at Max. Power 10 Hours	88.5
50% of Pull at Max. Power 2 Hours	88.5
50% of Pull at Reduced Engine Speed 2 Hours-	85.5
Bystander 16th Gear (4 Hi DD)	91.0

TIRES, BALLAST AND WEIGHT

	With Ballast	Without Ballast
Rear tires	—No., size, ply & psi Two 18.4-34;6;16	Two 18.4-34;6;16
Ballast	—Liquid 670 lb each	None
	—Cast iron None	None
Front tires	—No., size, ply & psi Two 9.5L-15;6;32	Two 9.5L-15;6;32
Ballast	—Liquid None	None
	—Cast iron 20 lb each	None
Height of drawbar	18 inches	19 inches
Static weight with operator—Rear	9510 lb	8170 lb
—Front	3210 lb	3170 lb
—Total	12720 lb	11340 lb

Department of Agricultural Engineering

Dates of Test: November 10 to December 5, 1972

Manufacturer: INTERNATIONAL HARVES-

TER COMPANY, Chicago, Illinois

FUEL, OIL AND TIME Fuel No 2 Diesel Cetane No. 54.5 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60° 0.8330** **Weight per gallon 6.936 lb** **Oil SAE 30** **API service classification CA/CD-SC/SE** **To motor 3.083 gal** **Drained from motor 1.603 gal** **Transmission and final drive lubricant I.H. Hy-Tran fluid** **Total time engine was operated 48½ hours**

ENGINE: Make International Diesel **Type** 6 cylinder vertical **Serial No** D360-592 **Crankshaft mounted lengthwise** **Rated rpm** 2600 **Bore and stroke** 3.875" × 5.085" **Compression ratio** 17 to 1 **Displacement** 360 cu in **Cranking system** 12 volt electric **Lubrication pressure** **Air cleaner** two stage dry type with replaceable pleated paper primary and safety elements with automatic dust unloader **Oil filter** two full flow pleated paper screw-on cartridges **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil **Fuel filter** replaceable pleated paper cartridges for primary and final filters **Muffler** was used **Cooling medium temperature control** thermostat

CHASSIS: Type standard **Serial No.** 249018-0U009072* **Tread width** rear 56" to 100" front 60" to 84" **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 centerline of rear wheels 29.9" Vertical distance above roadway 39.6" Horizontal distance from center of rear wheel tread 0" to the right/left **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (2) range operator controlled power shifting **Advertised speeds mph** first 1½ second 1¾ third 2 fourth 2½ fifth 3¼ sixth 4¼ seventh 4½ eighth 5 ninth 5¾ tenth 6½ eleventh 6¾ twelfth 8½ thirteenth 11½ fourteenth 14½ fifteenth 15½ sixteenth 19¾ reverse 2½, 3½, 3¾, 4¼, 5¾, 7¼, 7½, and 9¾. **Clutch** single plate dry disc operated by foot pedal **Brakes** dry double 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 134" left 134" (on concrete surface without brake) right 160" left 160" **Turning space diameter** (on concrete surface with brake applied) right 282" left 282" (on concrete surface without brake) right 340" left 340" **Power take-off** 540 rpm at 2305 engine rpm and 1000 rpm at 2269 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. Six gears were chosen between 15% slip and 15 mph.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1117.

L. F. LARSEN

Engineer-In-Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

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