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## Test 1118: International Farmall 1468 Diesel

Nebraska Tractor Test Lab

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# NEBRASKA TRACTOR TEST 1118 – INTERNATIONAL FARMALL 1468 DIESEL

Department of Agricultural Engineering

Dates of Test: November 9 to December 7, 1972

Manufacturer: INTERNATIONAL HARVESTER 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 I.H. No 1 Oil for Diesel Engines (CD CC CB CA SE SD SC-or DS DM DG MS) To motor 3.548 gal Drained from motor 2.999 gal Transmission and final drive lubricant 1H Hy-Tran fluid Total time engine was operated 60 hours.

**ENGINE** Make International Diesel Type eight cylinder Vee Serial No DV-550-24065 Crankshaft Mounted lengthwise Rated rpm 2600 Bore and stroke 4½" x 4 5/16" Compression ratio 17.0 to 1 Displacement 550 cu in Cranking system 12 volt electric Air cleaner two stage dry type with replaceable pleated paper primary and safety elements with automatic dust unloader Oil filter full flow using two replaceable pleated paper 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 two used Cooling medium temperature control thermostat

**CHASSIS** Type standard Serial No. 265011-8U009009 Tread width rear 60" to 104" 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 26.7" 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 Advertising speeds mph first 1½ second 2 third 2 fourth 2¾ fifth 3½ sixth 4½ seventh 5 eighth 5½ ninth 6¼ tenth 7 eleventh 7½ twelfth 9½ thirteenth 12¾ fourteenth 16½ fifteenth 17 sixteenth 22 reverse 2¾, 3½, 4½, 6¼, 8, 8½, 10¾ 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 1146 rpm at 2600 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. 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 1118.

L. F. LARSEN

Engineer-In-Charge

G. W. STEINBRUEGGE, Chairman

H. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

## POWER TAKE-OFF PERFORMANCE

Hp	Crankshaft speed rpm	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Cooling medium	Temperature Degrees F Air wet bulb	Air dry bulb	Barometer inches of Mercury
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—1146 rpm)								
145.49	2600	9.328	0.445	15.60	195	58	75	28.907
Standard Power Tawe-off Speed (1000 rpm)—One Hour								
136.85	2269	8.590	0.435	15.93	195	57	74	28.925
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
129.34	2714	8.521	0.457	15.18	183	57	74	.....
0.00	2836	3.140	.....	.....	164	56	72	.....
66.53	2792	5.640	0.588	11.80	170	57	75	.....
145.43	2600	9.381	0.447	15.50	193	58	78	.....
33.55	2804	4.498	0.930	7.46	165	55	71	.....
98.80	2769	7.007	0.492	14.09	174	57	75	.....
Av 78.94	2753	6.365	0.559	12.40	175	56	74	28.933

## DRAWBAR PERFORMANCE

Hp	Draw-bar pull lbs	Speed miles per hr	Crankshaft speed rpm	Slip of drivers %	Fuel Consumption Gal per hr	Lb per hp-hr	Hp-hr per gal	Cooling med	Temp 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—8th Gear (1 Hi TA)											
127.70	8813	5.43	2603	5.49	9.209	0.500	13.87	173	9	11	29.020
75% of Pull at Maximum Power—Ten Hours—8th Gear (1 Hi TA)											
107.23	6861	5.86	2780	4.52	8.113	0.524	13.22	165	34	36	29.225
50% of Pull at Maximum Power—Two Hours—8th Gear (1 Hi TA)											
74.87	4577	6.13	2860	2.89	6.704	0.621	11.17	159	37	45	29.175
50% of Pull at Reduced Engine Speed—Two Hours—12th Gear (2 Hi DD)											
74.96	4611	6.10	1668	2.97	5.118	0.473	14.65	162	47	58	28.630

## MAXIMUM POWER WITH BALLAST

122.53	12932	3.55	2710	10.15	5th Gear (3 Lo TA)	169	40	50	28.800
124.95	9908	4.73	2598	6.53	7th Gear (4 Lo TA)	167	40	50	28.800
128.72	8933	5.40	2596	5.72	8th Gear (1 Hi TA)	169	40	50	28.800
127.75	7757	6.18	2599	4.81	9th Gear (4 Lo DD)	169	40	50	28.800
128.84	6853	7.05	2597	4.19	10th Gear (1 Hi DD)	169	39	49	28.800
129.31	6614	7.33	2600	3.96	11th Gear (2 Hi TA)	169	40	50	28.800

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

Pounds Pull	8933	9511	9959	10335	10278	10054
Horsepower	128.72	122.75	113.37	102.48	87.93	71.96
Crankshaft Speed rpm	2596	2335	2070	1809	1562	1304
Miles Per Hour	5.40	4.84	4.27	3.72	3.21	2.68
Slip of Drivers %	5.72	6.31	6.61	6.90	7.19	6.76

## TRACTOR SOUND LEVEL (With Deluxe Cab) dB(A)

Maximum Available Power 2 Hours	91.5
75% of Pul at Max. Power 10 Hours	92.5
50% of Pull at Max. Power 2 Hours	92.0
50% of Pull at Reduced Engine Speed 2 Hours	88.5
Bystander 16th Gear (4 Hi DD)	91.5

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		700 lb each	None
	Cast Iron		None	None
Front tires	—No., size, ply & psi		Two 11 L-16;6;24	Two 11 L-16;6;24
Ballast	—Liquid		None	None
	Cast Iron		25 lb each	None
Height of drawbar			22 inches	22½ inches
Static weight with operator—Rear			12910 lb	10110 lb
Front			3400 lb	3350 lb
Total			16310 lb	13460 lb

The University of Nebraska Agricultural Experiment Station  
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