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January 1971

Test 1081: International Farmall 1066 Turbo Diesel

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1081 – INTERNATIONAL FARMALL 1066

TURBO DIESEL

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—1159 rpm)								
116.23	2400	7.665	0.460	15.16	180	65	75	28.957
Standard Power Take-off Speed (1000 rpm)—One Hour								
112.18	2071	6.790	0.422	16.52	177	64	75	28.965
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
103.39	2513	7.321	0.494	14.12	178	65	76	.....
0.00	2635	2.822	.....	.....	162	64	75	.....
53.08	2580	5.042	0.662	10.53	169	64	75	.....
115.76	2400	7.648	0.461	15.14	179	65	76	.....
26.98	2608	4.009	1.036	6.73	165	65	75	.....
78.87	2551	6.126	0.542	12.87	172	65	76	.....
Av 63.01	2548	5.495	0.608	11.47	171	64	75	28.973

DRAWBAR PERFORMANCE

Hp	Draw- bar pull lbs	Speed miles per hr	Crank- shaft speed rpm	Slip of drivers %	Fuel Consumption			Temp Degrees F			
					Gal per hr	Lb per hp-hr	Hp-hr per gal	Cool- ing med	Air wet bulb	Air dry bulb	Barometer inches of Mercury
VARYING POWER AND FUEL CONSUMPTION WITH BALLAST											
Maximum Available Power—Two Hours—8th Gear (1 Hi TA)											
100.50	7839	4.81	2400	8.14	7.635	0.529	13.16	177	45	54	29.050
75% of Pull at Maximum Power—Ten Hours—8th Gear (1 Hi TA)											
83.14	6008	5.19	2532	6.07	6.918	0.580	12.02	178	64	73	28.582
50% of Pull at Maximum Power—Two Hours—8th Gear (1 Hi TA)											
57.17	3991	5.37	2573	4.25	5.645	0.688	10.13	170	47	55	28.915
50% of Pull at Reduced Engine Speed—Two Hours—12th Gear (2 Hi DD)											
57.98	4000	5.43	1526	4.18	3.996	0.480	14.51	168	54	73	28.950
MAXIMUM POWER WITH BALLAST											
94.29	11625	3.04	2479	14.86	5th Gear (3Lo TA)			168	50	55	28.940
100.13	8974	4.18	2398	9.25	7th Gear (4Lo TA)			178	48	59	29.050
102.69	8005	4.81	2400	8.00	8th Gear (1Hi TA)			178	48	60	29.050
101.99	6950	5.50	2401	7.00	9th Gear (4Lo DD)			179	47	58	29.050
103.95	6192	6.30	2399	6.27	10th Gear (1Hi DD)			180	48	58	29.050
102.46	4531	8.48	2400	4.86	12th Gear (2Hi DD)			178	49	62	29.050
MAXIMUM PULL WITHOUT BALLAST											
83.44	10120	3.09	2529	14.94	5th Gear (3Lo TA)			166	56	60	29.050
VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST											
8th Gear (1 Hi TA)											
Pounds Pull				8005	8659	9260	10149	10531	10009		
Horsepower				102.69	98.57	92.61	87.42	77.53	61.63		
Crankshaft Speed rpm				2400	2148	1906	1663	1432	1187		
Miles Per Hour				4.81	4.27	3.75	3.23	2.76	2.31		
Slip of Drivers %				8.00	8.84	9.80	11.00	11.66	10.74		

TRACTOR SOUND LEVEL (with Deluxe Cab)

	dB(A)
Maximum Available Power 2 Hours	85.5
75% of Pull at Max. Power 10 Hours	86.5
50% of Pull at Max. Power 2 Hours	87.0
50% of Pull at Reduced Engine Speed 2 Hours	85.0
Bystander	16th gear (4Hi DD) 86.0

TIRES, BALLAST and WEIGHT

	With Ballast	Without Ballast
Rear tires	Two 18.4-38; 8; 20	Two 18.4-38; 8; 16
Ballast	1345 lb each	None
	145 lb each	None
Front tires	Two 11L-15; 6; 28	Two 11L-15; 6; 28
Ballast	None	None
	23 lb each	None
Height of drawbar	20 inches	20 inches
Static weight with operator—rear	11740 lb	8760 lb
front	3430 lb	3385 lb
total	15170 lb	12145 lb

Department of Agricultural Engineering

Dates of Test: October 1 to October 21, 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 4.547 gal Drained from motor 3.484 gal Transmission and final drive lubricant IH Hy-Tran fluid Total time engine was operated 55½ hours.

ENGINE Make International Diesel Type 6 cylinder vertical with turbo-charger Serial No 414TT2U004691* Crankshaft Mounted length-wise Rated rpm 2400 Bore and stroke 4.30" x 4.75" Compression ratio 16 to 1 Displacement 414 cu in Cranking system 12-volt electric Lubrication pressure Air cleaner two stage dry type with automatic dust unloader and replaceable pleated paper elements Oil filter full flow using 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 2610154-U009093* Tread width rear 60" to 94" 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 30.1" Vertical distance above roadway 41.38" 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 17½ 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, 3½, 4¼, 5¾, 7½, 7¾, 10 Clutch single plate dry disc operated by a 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 144" left 144" (on concrete surface without brake) right 165" left 165" Turning space diameter (on concrete surface with brake applied) right 295" left 295" (on concrete surface without brake) right 338" left 338" Power take-off 1014 or 539 rpm at 2100 engine rpm.

REPAIRS and ADJUSTMENTS During drawbar runs the valve tappet clearance for the intake valve in cylinder No .1 became excessive due to a loose nut. The proper clearance was set and test continued.

REMARKS All test results were determined from observed data obtained in accordance with SAE and ASAE test code or Nebraska test procedure. First, second, third, and fourth gears were not run as it was necessary to limit the pull in fifth gear to avoid excessive wheel slippage. Sixth, eleventh, 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 1081.

L. F. LARSEN

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers