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Test 1098: International Utility 574 Gasoline (Also International Row Crop Gasoline)

Nebraska Tractor Test Lab

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NEBRASKA TRACTOR TEST 1098 – INTERNATIONAL UTILITY 574 GASOLINE (ALSO INTERNATIONAL ROW CROP GASOLINE)

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—1004 rpm)								
52.97	2200	4.709	0.547	11.25	193	55	75	29.178
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
47.24	2307	4.410	0.574	10.71	187	55	75	.....
0.00	2425	1.800	.....	.....	176	55	74	.....
24.07	2351	3.025	0.773	7.96	182	55	75	.....
52.44	2200	4.654	0.546	11.27	190	55	75	.....
12.29	2399	2.493	1.247	4.93	178	55	76	.....
35.67	2221	3.693	0.637	9.66	182	55	75	.....
Av 28.62	2334	3.346	0.719	8.55	182	55	75	29.205

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
VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALAST											
Maximum Available Power—Two Hours—3rd Gear (3 Lo)											
44.03	3773	4.38	2194	6.37	4.574	0.639	9.63	179	56	67	28.905
75% of Pull at Maximum Power—Ten Hours—3rd Gear (3 Lo)											
36.46	2902	4.71	2312	4.38	4.029	0.680	9.05	177	48	59	28.601
50% of Pull at Maximum Power—Two Hours—3rd Gear (3 Lo)											
25.83	2009	4.82	2337	3.30	3.476	0.827	7.43	174	45	52	28.665
50% of Pull at Reduced Engine Speed—Two Hours 5th Gear (1 Hi)											
25.67	1999	4.82	1388	2.89	2.805	0.672	9.15	179	45	51	28.770

MAXIMUM POWER WITH BALLAST

32.45	6360	1.91	2319	14.96	1st Gear (1 Lo).....	174	53	61	28.940
43.70	5233	3.13	2201	9.75	2nd Gear (2 Lo).....	172	53	60	28.940
45.16	3861	4.39	2202	6.55	3rd Gear (3 Lo).....	173	54	63	28.940
43.62	2846	5.75	2202	4.80	4th Gear (4 Lo).....	175	54	64	28.940
44.87	2218	7.59	2202	3.42	5th Gear (1 Hi).....	175	55	67	28.940
42.47	1266	12.57	2203	1.65	6th Gear (2 Hi).....	177	54	62	28.930

VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST 3rd Gear (3 Lo)

Pounds Pull	3861	4159	4315	4296	4383	4511	4064
Horsepower	45.16	43.25	39.92	34.73	30.22	25.95	18.90
Crankshaft Speed rpm	2202	1973	1760	1540	1314	1101	881
Miles Per Hour	4.39	3.90	3.47	3.03	2.58	2.16	1.74
Slip of Drivers %	6.55	7.31	7.66	7.54	7.66	8.12	6.96

TRACTOR SOUND LEVEL dB(A)

Maximum Available Power 2 Hours	93.5
75% of Pull at Max. Power 10 Hours	94.5
50% of Pull at Max. Power 2 Hours	92.0
50% of Pull at Reduced Engine Speed 2 Hours	90.0
Bystander	8th gear (4 High) 81.5

TIRES, BALLAST and WEIGHT

	With Ballast	Without Ballast
Rear tires	—No., size, ply & psi Two 16.9-28; 6; 16	Two 16.9-28; 6; 16
Ballast	—Liquid 917 lb each	None
	—Cast Iron 786 lb each	None
Front tires	—No., size, ply & psi Two 7.50-16; 6; 24	Two 7.50-16; 6; 24
	—Liquid None	None
Ballast	—Cast Iron None	None
Height of drawbar	13½ inches	14½ inches
Static weight with operator—rear	6560 lb	3155 lb
front	1690 lb	1680 lb
total	8250 lb	4835 lb

Department of Agricultural Engineering

Date of Test: April 21 to May 11, 1972

Manufacturer: International Harvester Company, Chicago, Illinois

FUEL, OIL and TIME Fuel lead free gasoline Octane No. Motor 83 Research 91 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.7387 Weight per gallon 6.149 lb Oil SAE 30 API service classification I.H. No. 1 Oil for gasoline and LPG engines (SD and CC or MS) Drained from moter 1.368 gal Transmission and final drive lubricant I.H. Hy-Tran Fluid Total time engine was operated 40 hours.

ENGINE Make International gasoline Type 4 cylinder vertical Serial No. 200CT2U022179* Crankshaft Mounted lengthwise Rated rpm 2200 Bore and stroke 3 13/16" x 4.390" Compression ratio 7.33 to 1 Displacement 200.3 cu. in. Carburetor size 1" Ignition system battery Cranking system 12 volt electric Lubrication pressure Air Cleaner two stage dry type with replaceable pleated paper element and automatic dust unloader Oil filter full flow treated paper screw-on cartridge Oil Cooler radiator for transmission and hydraulic oil Fuel filter strainer in sediment bowl Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type standard Serial No. 2310001-U003514* Tread width rear 56" to 76" front 48" to 80" Wheel base 77.5" 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 27.8" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph first 2 second 3¼ third 4½ fourth 5¾ fifth 7½ sixth 12¼ seventh 16½ eighth 21¼ reverse 2½, 4¼, 5½, 7½ Clutch single plate dry disc operated by foot pedal Brakes wet single disc hydraulically power actuated by two foot pedals that can be locked together Steering hydrostatic Turning radius (on concrete surface with brake applied) right 114" left 114" (on concrete surface without brake) right 125" left 125" Turning space diameter (on concrete surface with brake applied) right 239" left 239" (on concrete surface without brake) right 261" left 261" Power take-off 1004 or 555 rpm at 2200 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. Seventh, and eighth 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 1098.

L. F. LARSEN

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station
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