January 1947

Test 390: Ellinwood Tiger Cat

Nebraska Tractor Test Lab
University of Nebraska-Lincoln, tractortestlab@unl.edu

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 390

Dates of test: November 11, 1947 to December 1, 1947 and
April 8, 1948 to April 14, 1948
Name and model of tractor: ELLINWOOD TIGER CAT
Manufacturer: ELLINWOOD INDUSTRIES, Los Angeles, California
Manufacturer's rating: None

HORSEPOWER SUMMARY

	DRAWBAR	BELT
1. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	2.72	4.47
2. Observed maximum horsepower (tests F & B)	2.63	4.30
3. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings)	2.04	3.80

REMARKS

No repairs or adjustments.

FUEL, OIL, and TIME

Fuel Gasoline Octane 74* Weight per gallon 5.923 pounds

Oil SAE No. 30 To motor 1.305 gal. Drained from motor 0.702 gal.

Total time motor was operated 50 hours

* Octane rating taken from oil company's typical inspection data.

We, the undersigned, certify that this is a true and correct report of official tractor test No. 390.

L. F. Larsen
Engineer in Charge

C. W. Smith

F. D. Yung

L. W. Hurlbut
BOARD OF TRACTOR TEST ENGINEERS

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 390

All results shown on pages 2 and 3 of this report were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with carburetor set for 100% maximum belt horsepower and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, H, and J were made with an operating setting of the carburetor (selected by the manufacturer) of 100% of maximum belt horsepower.

B E L T H O R S E P O W E R T E S T S

Horse-power	Crank shaft speed rpm	Fuel Consumption			Water used	Temperature		Barometer
		gal per hr	hp-hr per gal	lb per hp-hr	gal per hr	Cooling med °F	Air °F	Inches of Mercury
TESTS B & C - 100% MAXIMUM LOAD - TWO HOURS								
4.30	3198	0.536	8.02	0.738	Air Cooled		55	28.625
***TEST D - ONE HOUR**								
3.85	3200	0.552	6.97	0.849	Air Cooled		47	28.560
TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)								
3.85	3201	0.557	6.91	0.857	Air Cooled		46	-- ---
0.11	3543	0.218	0.50	11.727	--- ------		45	-- ---
2.00	3288	0.339	5.90	1.005	--- ------		45	-- ---
4.24	3069	0.527	8.05	0.736	--- ------		46	-- ---
1.05	3410	0.276	3.80	1.557	--- ------		45	-- ---
2.93	3200	0.446	6.57	0.901	--- ------		45	-- ---
2.36	3285	0.394	5.99	0.989	Air Cooled		45	28.520

* Formerly called RATED LOAD; see HORSEPOWER SUMMARY 3, page 1.

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 390

DRAWBAR HORSEPOWER TESTS

Horse-power	Draw bar pull lb	Speed mph	Crank shaft speed rpm	Slip on drive wheels %	Fuel Consumption: gal per hr	Fuel Consumption: hp-hr per gal	Fuel Consumption: lb per hp-hr	Water used gal per hr	Temperature: Cooling med °F	Temperature: Air °F	Barometer Inches of Mercury

Rear wheels, tires, and added weight used in Tests F, G, and H: Steel disc wheels; 5.50-16, 2 ply tires and 201 lb added weight per wheel.

TESTS F & G - 100% MAXIMUM LOAD - 1st GEAR

2.63	397	2.48	3195	6.35	------Not Recorded------				Air	58	28.845

*TEST H - TEN HOURS - 1st GEAR

2.19	316	2.60	3201	3.76	0.613	3.57	1.659	0.00	Air	47	28.900

TEST J - OPERATING MAXIMUM LOAD

1.23	211	2.19	3205	19.45	------Not Recorded------				Air	65	28.850

* Formerly called RATED LOAD; see HORSEPOWER SUMMARY 3, page 1.

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 390

TIRES, WHEELS and WEIGHT

		Tests F, G, & H	Test J
Rear Wheel: (each)	Type	Steel Disc	Steel Disc
	Liquid Ballast	61 lb	None
	Added Cast Iron	140 lb	None
Rear Tires:	No. Size & Ply	2 5.50-16 2 ply	2 5.50-16 2 ply
	Type of Tread	Sure Grip	Sure Grip
	Make	Goodyear	Goodyear
	Air Pressure	10 lb	8 lb
Height of Drawbar		14 inches	14 inches
Static Weight		780 lb	378 lb
Total Weight as Tested		780 lb	378 lb

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 390

SPECIFICATIONS

Type Garden Tractor Serial No. 47-T-1092 Drive V-Belt and chain

Tread width: Rear 19 in to 28 in Front --------

Advertised speeds, miles per hour: First 2.5

Belt pulley: Diam. 5 in Face 3½ in RPM 1600 Belt speed 2100 fpm

Clutch: Make Ellinwood Type Idler pully belt tightener Operated by hand

Seat None

Brakes None

Engine:

Make Own Serial No. 6210 Type Single Cylinder - 45° angle

Head L Mounting Crankshaft crosswise Lubrication Pressure feed & splash

Bore and stroke 2 5/8 in x 2 5/8 in Rated rpm 3200

Port diameter valves: Inlet 15/16 in Exhaust 15/16 in

Magneto: Make Bendix Scintilla Model K 1-7

Carburetor: Make Bendix Stromberg Model 427078 Size 5/8 in

Governor: Make Ellinwood Type Fly Ball

Air Cleaner: Make Air Maze Type Oil bath

Oil Filter: None