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January 1940

Test 348: Case Model VC

Nebraska Tractor Test Lab

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 348

Dates of test: June 18 to 25, 1940.

Name and model of tractor: CASE VC

Manufacturer: J. I. Case Company, Racine, Wisconsin.

Manufacturer's rating NOT RATED.

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

H. P.	Crank shaft speed R.P.M.	Fuel Consumption			Water used gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.		Cool- ing med.	Air	

TEST B - 100% MAXIMUM LOAD - TWO HOURS

24.48	1650	2.205	11.10	0.549	0.000	184	88	28.990
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TEST C - OPERATING MAXIMUM LOAD - ONE HOUR

23.76	1650	2.097	11.33	0.538	0.000	164	76	29.000
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*TEST D - ONE HOUR

22.07	1647	2.007	11.00	0.555	0.000	176	91	28.790
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

22.12	1649	2.011	11.00	0.555	--	177	92	--
1.55	1740	0.861	1.80	3.387	--	139	70	--
11.12	1676	1.323	8.41	0.726	--	144	70	--
22.56	1597	2.036	11.08	0.551	--	154	72	--
5.68	1710	1.062	5.35	1.141	--	142	70	--
16.32	1640	1.623	10.06	0.607	--	147	69	--
13.23	1669	1.487	8.90	0.686	0.000	150	74	28.930

D R A W B A R H O R S E P O W E R T E S T S

H.P.	Draw bar pull pounds	Speed miles per hr.	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption			Water used gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per hr.	H.P. per gal.	Lb. per H.P. hr.		Cool- ing med.	Air	

TEST F - 100% MAXIMUM LOAD - Second - GEAR

18.55	2034	3.42	1426	7.05	-----	Not Recorded	-----	202	92	28.600
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TEST G - OPERATING MAXIMUM LOAD

17.50	2798	2.35	1426	12.28	-----	Not Recorded	-----	175	79	28.870
18.18	1990	3.43	1427	7.05	-----	"	"	199	92	28.625
18.70	1567	4.43	1427	5.11	-----	"	"	167	70	28.925
17.86	682	9.82	1422	2.76	-----	"	"	170	73	28.890

*TEST H - TEN HOURS - Second - GEAR

15.07	1627	3.47	1424	5.50	1.624	9.28	0.657	0.000	168	84	28.795
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*Formerly called RATED LOAD; see REMARKS 4, page 3.

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FUEL, OIL, AND TIME

Fuel Gasoline Octane 71 Weight per gallon 6.10 pounds
Oil: S.A.E. No. 20 To motor 1.182 gal. Drained from motor 0.979 gal.
Total time motor was operated 52 hours

BRIEF SPECIFICATIONS

Advertised speeds miles per hour: First 2.65 Second 3.64
Third 4.67 Fourth 10.03 Reverse 2.25
Belt pulley: Diam. 10-1/4" Face 6" R.P.M. 1122 Belt Speed 3011 f.p.m.
Clutch: Make Atwood Type Single plate Operated by foot
Seat Pressed Steel

Total weight as tested (with operator) 4290 pounds

MOTOR

Make Continental Serial No. CFA124 4934 Type 4 cylinder, vertical
Head L Mounting Crankshaft lengthwise Lubrication Pressure
Bore and stroke 3" x 4-3/8" Rated R.P.M. (Drawbar 1425
(Belt 1650
Port diameter valves: Inlet 1-3/8" Exhaust 1-1/16"
Magneto: Make Edison-Splitdorf Model RM 03139
Carburetor: Make Schebler Model TSX 43 Size 1"
Governor: Make Continental-Novis Type Variable speed, centrifugal
Air Cleaner: Make United Type Oil-washed, crimped wire
Oil Filter: None

Cooling medium temperature control: Harrison thermostat

CHASSIS

Type Tricycle Serial No. VC 4415115 Drive Enclosed gear
Tread width: Rear 44" - 82" Front: Top 11-1/4" Bottom 5-1/2"
Rear tires: No. 2 Size 9 x 32 - 4 ply Air pressure 16 pounds
Front tires: No. 2 Size 5.00" x 15" - 4 ply Air pressure 26 pounds
Added weight: Per rear wheel (Cast Iron 528 pounds
(Calcium Chloride Solution 200 pounds
Per front wheel (Cast Iron 63 pounds
(Calcium Chloride Solution 21 pounds

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REPAIRS AND ADJUSTMENTS

During the maximum drawbar horsepower tests, the oil line connection to the oil pressure gauge began to leak. The leak was stopped by properly flanging the end of the line.

REMARKS

1. All results shown on page 1 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, and H were made with an operating setting of the carburetor (selected by the manufacturer) of 95.9% of maximum belt horsepower.

	<u>DRAWBAR</u>	<u>BELT</u>
2. Observed maximum horsepower (tests F & B)	18.55	24.48
3. Sea level (calculated) maximum horsepower (based on 600 F. and 29.92" Hg.)	20.00	25.95
4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings)	15.00	22.06

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 348.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers