January 1936

Test 251: Case RC

Nebraska Tractor Test Lab
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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLN

Report of Official Tractor Test No. 251

Dates of test: April 7 to 16, 1936.
Name and model of tractor: CASE "RC"
Manufacturer: J. I. Case Company, Racine, Wisconsin.
Manufacturer's rating: NOT RATED.

B R A K E 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: Gals. per hour	Fuel Consumption: H. P. hrs. per gal.	Fuel Consumption: Lbs. per H. P. hour	Water Consumption per hour gallons: Cooling	Water Consumption per hour gallons: In fuel	Water Consumption per hour gallons: Total	Temp. Deg. F.: Cooling med.	Temp. Deg. F.: Air	Barometer Inches of Mercury
TEST B 100% MAXIMUM LOAD. TWO HOURS										
19.80	1428	2.335	8.48	0.727	0.000	0.000	0.000	193	60	28.870
TEST C OPERATING MAXIMUM LOAD. ONE HOUR										
18.98	1425	1.958	9.69	0.635	0.000	0.000	0.000	193	74	28.760
TEST D RATED LOAD. ONE HOUR										
17.55	1423	1.778	9.87	0.624	0.000	0.000	0.000	203	92	28.630
TEST E *VARYING LOAD. TWO HOURS										
17.58	1426	1.821	9.65	0.638	--	--	--	204	96	--
.84	1508	0.769	1.09	5.643	--	--	--	179	94	--
9.30	1489	1.237	7.52	0.819	--	--	--	194	94	--
18.51	1394	1.890	9.79	0.629	--	--	--	202	94	--
4.77	1506	0.930	5.13	1.201	--	--	--	196	92	--
13.24	1467	1.593	8.31	0.741	--	--	--	192	88	
10.71	1465	1.373	7.80	0.790	0.000	0.000	0.000	194	93	28.620

*20 minute runs. Last line is average for two hours.

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 hour	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption: Gal. per hour	Fuel Consumption: H. P. hour per gal.	Fuel Consumption: Lbs. per H.P. hour	Water used Gal. per H.P. hour	Temp. Cooling med.	Temp. Air	Barometer Inches of Mercury
TEST F 100% MAXIMUM LOAD. Second GEAR.											
14.21	1519	3.51	1424	4.51	-------	Not Recorded	-------		200	77	28.740
TEST G OPERATING MAXIMUM LOAD											
13.26	2103	2.36	1430	3.98	-------	Not Recorded	-------		200	70	28.660
12.80	1343	3.52	1426	4.38	-------	"	-------		200	78	28.730
12.08	942	4.81	1412	4.16	-------	"	-------		200	77	28.660
TEST H RATED LOAD. TEN HOURS. Second GEAR.											
11.61	1228	3.55	1424	3.47	1.738	6.72	.917	0.298	196	57	29.120

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BRIEF SPECIFICATIONS

MOTOR: Make Waukesha Serial No. RC300875 Type 4 cylinder, vertical

Head L Mounting Crankshaft lengthwise

Bore and stroke: 3 1/4" x 4" Rated R. P. M. 1425

Port Diam. Valves: Inlet 1 3/16" Exhaust 1 3/16"

Belt pulley: Diam. 10 1/8" Face 6 1/4" R. P. M. 991

Magneto: American Bosch Model MJB4A108

Carburetor Zenith Model 193 1/2 Size 7/8"

Governor: Case Waukesha No. -- Type Centrifugal

Air Cleaner: United Type Oil-washed wire filter

Lubrication: Pressure

CHASSIS: Type 3 wheels, 2 drivers Serial No. -- Drive Enclosed chain

Clutch: Twin Disc Type Single plate Operated by Hand

Advertised speeds, miles per hour: First 2.33 Second 3.33

Third 4.5 Fourth ____ Reverse 2.5

Drive wheels: Diameter 48" Face 2 1/2"

Lugs: Type Spade No. per wheel 18 Size 3 1/2" wide, 4" high

Seat Pressed steel

Total weight as tested (with operator) 3350 pounds.

FUEL AND OIL:

Fuel: Gasoline Weight per gallon 6.16 pounds

Oil: S.A.E. #20

Total oil to motor 1.653 gallons

Total drained from motor 0.942 gallons

The oil was drained once - at the end of the test.

Total time motor was operated 52 hours.

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REPAIRS AND ADJUSTMENTS

No Repairs or Adjustments.

REMARKS

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 horsepower. These figures were used in determining the ratings recommended by the A.S.A.E. and S.A.E. tractor rating codes. Tests C, D, E, G, and H were made with an operating setting of the carburetor (selected by the manufacturer) of 95.9%.

Observed maximum horsepower (tests B & F)	Drawbar 14.21	Belt 19.80
Sea level (calculated) maximum horsepower (Based on 60° F. and 29.92" Hg.)	Drawbar 15.03	Belt 20.52
Highest permissible horsepower ratings (As recommended by A.S.A.E. and S.A.E. codes)	Drawbar 11.27	Belt 17.44

The 100% maximum belt and drawbar tests were not included in reports issued from 1928 to 1934 inclusive, except in those cases where the 100% maximum setting was used throughout the complete test.

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 251.

Engineer-in-charge

Board of Tractor Test Engineers