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January 1936

Test 260: Cletrac AG

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. 260

Dates of test: June 16 to 26, 1936.

Name and model of tractor: CLETRAC AG

Manufacturer: Cleveland Tractor Company, Cleveland, Ohio.

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 :	Fuel Consumption : Gals. : H. P. : Lbs. per :	Water Consumption : : per hour gallons :	Temp. : : Deg. F. :	:Barometer
:speed :	: R.P.M. : per	: hrs. per : H. P. : ing	: Cool-: In :	: Cool-: :Inches of	:Mercury
:	: hour	: gal. : hour	:	: med. :	:

TEST B 100% MAXIMUM LOAD. TWO HOURS

30.25 : 1398 : 3.460 : 8.74 : 0.702 : 0.000 : 0.000 : 0.000 : 195 : 98 : 28.755

TEST C OPERATING MAXIMUM LOAD. ONE HOUR

30.12 : 1399 : 3.313 : 9.09 : 0.675 : 0.000 : 0.000 : 0.000 : 194 : 96 : 28.780

TEST D RATED LOAD. ONE HOUR

27.89 : 1399 : 3.246 : 8.59 : 0.715 : 0.000 : 0.000 : 0.000 : 194 : 90 : 28.810

TEST E *VARYING LOAD. TWO HOURS

28.04 : 1404 : 3.254 : 8.62 : 0.713 : -- : -- : -- : 184 : 91 : --
 1.24 : 1541 : 1.383 : 0.89 : 6.847 : -- : -- : -- : 151 : 90 : --
 13.45 : 1479 : 2.213 : 6.08 : 1.010 : -- : -- : -- : 172 : 93 : --
 29.09 : 1370 : 3.279 : 8.87 : 0.692 : -- : -- : -- : 192 : 92 : --
 7.53 : 1506 : 1.730 : 4.35 : 1.410 : -- : -- : -- : 162 : 92 : --
 21.55 : 1439 : 2.712 : 7.95 : 0.773 : -- : -- : -- : 180 : 94 : --
 16.82 : 1456 : 2.429 : 6.92 : 0.886 : 0.000 : 0.000 : 0.000 : 173 : 92 : 28.810

*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 :	Speed : : miles :	Crank : : shaft :	Slip : : on :	Fuel Consumption : H. P. : Lbs. :	Water: : used :	Temp. : : :Barometer
:	: pull : : pounds :	: per : hour :	: speed : : R.P.M. :	: drive: : wheels :	: Gal. : hour : per	: Gal. : Cool-: :Inches of	: Air:Mercury
:	:	:	:	: % : hour:	: gal. : hour	: hour : med. :	:

TEST F 100% MAXIMUM LOAD. Second GEAR.

24.44 : 3584 : 2.56 : 1400 : 3.12 : -----Not Recorded----- : 190 : 81 : 29.005

TEST G OPERATING MAXIMUM LOAD

22.74 : 5254 : 1.62 : 1399 : 10.09 : -----Not Recorded----- : 176 : 80 : 29.000
 24.58 : 3586 : 2.57 : 1401 : 2.65 : ----- " " ----- : 170 : 76 : 29.000
 23.23 : 2346 : 3.71 : 1401 : 1.67 : ----- " " ----- : 180 : 82 : 29.010

TEST H RATED LOAD. TEN HOURS. Second GEAR.

19.40 : 2830 : 2.57 : 1400 : 2.57 : 3.104 : 6.25 : 0.982 : 0.056 : 193 : 96 : 28.660

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Copy of Report of Official Tractor Test No. 260

BRIEF SPECIFICATIONS

MOTOR: Make Hercules Serial No. 235266 Type 4 cylinder, vertical
 Head L Mounting Crankshaft lengthwise
 Bore and stroke 4" x 4 1/2" Rated R. P. M. 1400
 Port Diam. Valves: Inlet 1 1/2" Exhaust 1 3/8"
 Belt pulley: Diam. 10 1/2" Face 8 1/2" R. P. M. 1166
 Magneto American Bosch Model MJB4A101
 Carburetor Tillotson Model P-1-B Size 1 1/8"
 Governor Hercules No. -- Type Centrifugal
 Air Cleaner: Vortex Type Oil-washed, wire-filter
 Lubrication Pressure

CHASSIS: Type Tracklayer Serial No. 14982 Drive Enclosed gear
 Clutch Long Type Two-plate, dry Operated by Foot pedal
 Advertised speeds, miles per hour: First 1.75 Second 2.625
 Third 3.75 Reverse 1.375
 Measured length of track 16.1333 feet Face 12"
 Lugs: Type Removable rolled steel cleats No. per track 29
 Size 12" long x 1 7/8" high
 Seat Upholstered
 Total weight as tested (with operator) 7025 pounds.

FUEL AND OIL:

Fuel Gasoline (68-70 Octane) Weight per gallon 6.14 pounds.
 Oil S.A.E. Viscosity No. 30
 Total oil to motor 1.703 gallons
 Total drained from motor 0.774 gallons
 Total time motor was operated 50 hours

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

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
AGRICULTURAL COLLEGE, LINCOLNCopy of Report of Official Tractor Test No. 260REPAIRS AND ADJUSTMENTS

During the rated load drawbar test the tractor stopped three times. The air temperature at the time of the first stop was 103° F, at the second 107° F and at the third 110° F. The temperature of the fuel in the fuel tank at the time of the first stop was 120° F. The initial boiling point of the fuel used was 136° F. These operating conditions indicate that the stops were due to vapor lock.

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 99.6% of maximum horsepower.

Observed maximum horsepower (tests B & F) Drawbar 24.44 Belt 30.25

Sea level (calculated) maximum horsepower Drawbar 25.71 Belt 32.61
(Based on 60° F. and 29.92" Hg.)Highest permissible horsepower ratings Drawbar 19.28 Belt 27.72
(As recommended by A.S.A.E. and S.A.E.
codes)

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 260.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut
Board of Tractor Test Engineers