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January 1936

## Test 259: Cletrac BG

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 259

Dates of test: June 16 to July 10, 1936.  
Name and model of tractor: CLETRAC BG  
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 :Inches of :Mercury
	:speed : :R.P.M. : : : hour :	: hrs. per : : gal. : hour :	: Cool- : In : : ing : fuel : Total : : : : : : : med. : :		

TEST B 100% MAXIMUM LOAD. TWO HOURS

39.07	: 1401	: 4.635	: 8.43	: 0.728	: 0.000	: 0.000	: 0.000	: 192	: 80	: 29.080
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TEST C OPERATING MAXIMUM LOAD. ONE HOUR

38.42	: 1398	: 4.363	: 8.81	: 0.697	: 0.000	: 0.000	: 0.000	: 197	: 82	: 29.010
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TEST D RATED LOAD. ONE HOUR

35.03	: 1401	: 4.096	: 8.55	: 0.718	: 0.000	: 0.000	: 0.000	: 193	: 82	: 29.005
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TEST E \*VARYING LOAD. TWO HOURS

34.99	: 1405	: 4.207	: 8.32	: 0.738	: --	: --	: --	: 192	: 82	: --
1.34	: 1625	: 2.072	: 0.65	: 9.493	: --	: --	: --	: 154	: 83	: --
19.28	: 1537	: 3.308	: 5.83	: 1.053	: --	: --	: --	: 171	: 84	: --
36.68	: 1323	: 4.085	: 8.98	: 0.684	: --	: --	: --	: 198	: 84	: --
9.81	: 1584	: 2.697	: 3.64	: 1.688	: --	: --	: --	: 167	: 87	: --
26.87	: 1443	: 3.655	: 7.35	: 0.835	: --	: --	: --	: 185	: 87	: --
21.50	: 1486	: 3.337	: 6.44	: 0.953	: 0.000	: 0.000	: 0.000	: 178	: 84	: 29.005

\*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 :Inches of :Mercury
	: pull : : pounds :	: per : hour :	: speed : : R.P.M. :	: drive: : wheels :	: Gal. : hour : : per : per : : hour : gal. : hour :	: Gal. : : per : : hour :	: Cool- : : ing : : med. : :	

TEST F 100% MAXIMUM LOAD. Second GEAR.

28.27	: 4088	: 2.59	: 1399	: 2.46	: -----	: Not Recorded	: -----	: 212	: 99	: 28.725
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TEST G OPERATING MAXIMUM LOAD

27.20	: 6131	: 1.66	: 1399	: 8.54	: -----	: Not Recorded	: -----	: 194	: 95	: 28.680
27.53	: 3972	: 2.60	: 1400	: 2.27	: -----	: " "	: -----	: 210	: 98	: 28.705
26.32	: 2882	: 3.43	: 1398	: 1.50	: -----	: " "	: -----	: 205	: 94	: 28.450

TEST H RATED LOAD, TEN HOURS. Second GEAR.

23.03	: 3309	: 2.61	: 1400	: 1.85	: 3.755	: 6.13	: 1.001	: 0.132	: 203	: 94	: 28.770
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Copy of Report of Official Tractor Test No. 259

BRIEF SPECIFICATIONS

MOTOR: Make Hercules Serial No. 563217 Type 6 cylinder, vertical  
 Head L Mounting Crankshaft lengthwise  
 Bore and stroke: 3 3/4" x 4 1/4" Rated R. P. M. 1400  
 Port Diam. Valves: Inlet 1 1/2" Exhaust 1 3/8"  
 Belt pulley: Diam. 12" Face 8 1/2" R. P. M. 1050  
 Distributor: Delco-Remy Model 645 H  
 Carburetor Tillotson Model Y-8-C Size 1 1/4"  
 Governor Hercules No. -- Type Centrifugal  
 Air Cleaner Vortex Type Oil-washed, wire-filter  
 Lubrication Pressure

CHASSIS: Type Tracklayer Serial No. 4C36 Drive Enclosed gear  
 Clutch Long Type Two-plate, dry Operated by Foot pedal  
 Advertised speeds, miles per hour: First 1.8 Second 2.625  
 Third 3.5 Reverse 1.375  
 Measured length of track 16.7031 feet Face 14"  
 Lugs: Type Removable rolled steel cleats No. per track 30  
 Size 14" long x 1 7/8" high  
 Seat Upholstered  
 Total weight as tested (with operator) 8686 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 2.671 gallons  
 Total drained from motor 0.977 gallons  
 Total time motor was operated 65 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. 259REPAIRS AND ADJUSTMENTS

During the rated load drawbar test, the action of the external parts of the governor mechanism became sluggish. To restore proper action, the dust was washed from the parts and the cam of the cam-and-follower group was polished.

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 and 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 98.3% of maximum horsepower.

Observed maximum horsepower (tests B & F) Drawbar 28.27 Belt 39.07

Sea level (calculated) maximum horsepower Drawbar 30.53 Belt 40.95  
(Based on 60° F. and 29.92" Hg.)

Highest permissible horsepower ratings Drawbar 22.90 Belt 34.81  
(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. 259.

Carlton L. Zink  
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. E. Hurlbut