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January 1932

Test 208: Caterpillar Diesel

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 208

Dates of test: June 14 to July 20, 1932.
 Name and model of tractor: CATERPILLAR "DIESEL"
 Manufacturer: Caterpillar Tractor Company, Peoria, Illinois.
 Manufacturer's rating: NOT RATED.
 Highest rating permissible under the recommendations of the A.S.A.E. and
 S.A.E. Tractor Rating Codes: Drawbar - 54.00 H.P. Belt - 73.85 H.P.
 One carburetor setting (96% of maximum) was used throughout this test.

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. @ : H.P. :	Water consumption : per hour gallons :	Temp. : Deg. F. :	Barometer : Inches of Mercury :
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OPERATING MAXIMUM LOAD TEST. ONE HOUR

77.08	700	5.976	12.90	0.580	1.936	0.00	1.936	212	102	28.605
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RATED LOAD TEST. ONE HOUR

74.73	702	5.388	13.87	0.540	0.00	0.00	0.00	201	73	28.855
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*VARYING LOAD TEST. TWO HOURS

74.98	702	5.457	13.74	0.545	---	---	---	202	75	---
0.57	749	1.567	0.36	20.579	---	---	---	180	74	---
38.93	735	3.157	12.33	0.607	---	---	---	188	76	---
75.87	683	5.750	13.19	0.567	---	---	---	196	75	---
19.89	743	2.312	8.60	0.870	---	---	---	194	77	---
56.37	716	4.003	14.08	0.532	---	---	---	199	77	---
45.36	721	3.708	12.23	0.612	0.00	0.00	0.00	193	75	28.840

*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 : per : hour :	Crank : shaft : speed : R.P.M. :	Slip : on : drive : wheels : % :	Fuel Consumption : H.P. : Lbs. : per : H.P. : gal. : hour :	Water : used : Gal. : per : hour :	Temp. : Cool- : Air : mod. :	Barometer : Inches of Mercury :
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RATED LOAD TEST. TEN HOURS. SECOND GEAR.

53.78	7300	2.76	702	1.05	4.611	11.66	0.642	0.00	191	89	28.650
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MAXIMUM LOAD TEST

65.11	11991	2.04	699	1.22	-----	Not Recorded	-----	195	100	28.795
64.55	8817	2.75	699	1.22	-----	" "	-----	208	103	28.800
55.83	4449	4.71	701	0.52	-----	" "	-----	185	101	28.800

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 1 C 15 Type 4 Cylinder, Vertical, Diesel
Head I Mounting Lengthwise
Bore and stroke: 6 1/8" x 9 1/4" Rated R.P.M. 700
Port Dia. Valves: Inlet 2 5/16" Exhaust 2 5/16"
Belt pulley: Diam. 15" Face 11" R.P.M. 700
Fuel System: Robert Bosch
Governor: Own No. None Type Flyball
Air Cleaner: Own under Vortex patents Type Centrifugal, oil and matted wire
Lubrication: Pressure

CHASSIS: Type Tracklayer Serial No. 1 C 15 Drive Enclosed gear
Clutch: Own Type Single plate - dry operated by hand lever
Advertised speeds, miles per hour: Low 2.1
Intermediate 2.8 High 4.7 Reverse 1.5
Measured length of track 22,7481 feet Face 16 inches
Lugs: Type Cleats integral with shoes No. per track 34 Size 16" x 2 1/2"
Extension rims: None
Seat: Upholstered
Total weight as tested (with operator) 25,860 pounds.

FUEL AND OIL

Fuel: Fuel oil Weight per gallon 7.487 lbs.
Oil: S. A. E. Viscosity No. 50 The oil was drained once -
at the end of the test.
Total oil to motor 7.013 gallons
Total drained from motor 5,292 gallons
Total time motor was operated 54 hours

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

The track and lug equipment used in the drawbar tests is the same as that described on page 2 of this report.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 208.

Carlton L. Zink
Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis
Board of Tractor Test Engineers