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Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F. Larsen

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January 1936

## Test 253: Caterpillar Model RD-7 (Diesel) 61 h.p. at 850 r.p.m.

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

Corrected Copy of Report of Official Tractor Test No. 254

BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 9G687 Type 4 cylinder, vertical, diesel  
 Head I Mounting Crankshaft lengthwise  
 Bore and stroke 5 3/4" x 8" Rated R.P.M. 850  
 Port diameter valves: Inlet 2 1/16" Exhaust 2 1/16"  
 Belt pulley: Diameter 13 3/8" Face 12 1/2" R.P.M. 753  
 Fuel system Own  
 Governor Own No. None Type Centrifugal  
 Air Cleaner Donaldson Type Combination oil and wire-screen labyrinth  
 Lubrication Pressure

CHASSIS: Type Tracklayer Serial No. 9G687 Drive Enclosed gear  
 Clutch Own Type Single-plate, dry Operated by hand  
 Advertised speeds, miles per hour: First 1.6 Second 2.4  
 Third 3.4 Fourth 4.7 Reverse 1.9  
 Measured length of track 21.9844 feet Face 18"  
 Lugs: Type Cleats integral with shoes No. per track 35  
 Size 18" x 2 1/8"  
 Seat Upholstered  
 Total weight as tested (with operator) 21,020 pounds.

FUEL AND OIL:

Fuel Dieseline Weight per gallon, pounds 6.95  
 Oil S.A.E. Viscosity No. 30  
 Total oil to motor 4.518 gallons  
 Total drained from motor 3.927 gallons  
 Total time motor was operated 27 hours

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

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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. Test B and F were made with fuel pumps set to develop 69 drawbar horsepower maximum in second gear, under standard conditions. 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 the same setting.

Observed maximum horsepower (tests B & F)	Drawbar 65.73	Belt 77.47
Sea Level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	Drawbar 69.41	Belt 82.04
Highest permissible horsepower ratings (as recommended by A.S.A.E. and S.A.E. codes)	Drawbar 52.06	Belt 69.73

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 254.

Carlton L. Zink  
 Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut  
 Board of Tractor Test Engineers