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January 1940

## Test 345: International TracTractor Model TD-6 (WideTread)

Nebraska Tractor Test Lab

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

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3 pages-page 1

UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 345

Dates of test: May 6 to June 1, 1940.

Name and model of tractor: INTERNATIONAL TRACTRACTOR (Wide Tread) TD-6

Manufacturer: International Harvester Company, Chicago, Illinois.

Manufacturer's rating: NOT RATED.

B E L T 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			Water used gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hr.	H. P. hr. per gal.	Lb. per H. P. hr.		Cool- ing med.	Air	

TESTS B AND C - 100% MAXIMUM LOAD - TWO HOURS

34.54	1448	2.427	14.23	0.490	0.000	189	75	28.925
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\*TEST D - ONE HOUR

30.82	1451	2.119	14.54	0.480	0.000	191	74	28.920
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TEST E - VARYING LOAD - TWO HOURS (20 minute runs; last line average)

30.80	1451	2.115	14.56	0.479	--	191	75	--
1.39	1559	0.787	1.77	3.950	--	193	77	--
16.19	1516	1.298	12.47	0.560	--	194	72	--
34.12	1422	2.377	14.35	0.486	--	195	73	--
8.23	1542	1.019	8.08	0.864	--	194	74	--
23.76	1488	1.736	13.69	0.510	--	194	72	--
19.08	1496	1.555	12.27	0.569	0.000	193	74	28.930

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 hr.	Crank shaft speed R.P.M.	Slip on drive wheels %	Fuel Consumption			Water used gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per hr.	H.P. per gal.	Lb. per H.P. hr.		Cool- ing med.	Air	

TESTS F AND G - 100% MAXIMUM LOAD

26.75	7160	1.40	1449	8.24	-----	Not Recorded	-----	193	75	28.805
28.14	4929	2.14	1443	3.27	-----	"	"	190	69	28.795
27.29	3368	3.04	1450	3.40	-----	"	"	191	68	28.690
26.35	2641	3.74	1443	2.53	-----	"	"	188	68	28.675
23.84	1661	5.38	1450	1.22	-----	"	"	192	73	28.650

\*TEST H - TEN HOURS - Second - GEAR

22.28	3818	2.19	1452	1.77	1.824	12.21	0.571	0.038	188	82	28.885
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\*Formerly called RATED LOAD; see REMARKS 4, page 3.

3 pages-page 2

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FUEL, OIL, AND TIME

Fuel Commercial diesel fuel Weight per gallon 6.98 pounds  
Oil: S.A.E. No. 20 To motor 2.504 gal. Drained from motor 2.175 gal.  
Total time motor was operated 47 hours

BRIEF SPECIFICATIONS

Advertised speeds, miles per hour: First 1.5 Second 2.2  
Third 3.1 Fourth 3.8 Fifth 5.4 Reverse 1.7  
Belt pulley: Diam. 12-1/4" Face 8" R.P.M. 811 Belt Speed 2600 f.p.m.  
Clutch: Make Rockford Type Single plate, dry disc Operated by hand  
Seat Upholstered

Total weight as tested (with operator) 7950 pounds

MOTOR

Make Own Serial No. TBKM 671 Type 4 cylinder, vertical diesel  
Head I Mounting Crankshaft lengthwise Lubrication Pressure  
Bore and stroke 3-7/8" x 5-1/4" Rated R.P.M. 1450  
Port diameter valves: Inlet 1.500" Exhaust 1.312"  
Magneto: (For starting only) Make Own Model H-4  
Carburetor: (For starting only) Make Own Model F Size 3/4"  
Governor: Make Bosch Type Variable speed, centrifugal  
Fuel Injection System: Make Bosch Serial No. 51795 Model APE4A 80N320 S500  
Air Cleaner: Make Donaldson Type Oil-washed wire-screen filter  
Oil Filter: Make Motor Improvements Inc., Type Partial flow, with replace-  
able bakelite impregnated paper element  
Cooling medium temperature control: Bishop and Babcock thermostat and Pines  
radiator shutters

CHASSIS

Type Tracklayer Serial No. 507 Drive Enclosed gear  
Tread width 50" (wide tread) Measured length of track 16.0389'  
Cleats: Type Integral with shoes No. per track 32  
Size 1-15/16" high x 16" long (square corners)

3 pages-page 3

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REPAIRS AND ADJUSTMENTS

During the varying load belt test, the belt pulley jaw clutch became disengaged. After adjusting the locking detent, the test was resumed.

REMARKS

1. 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 fuel pumps set to develop approximately 34.4 observed belt horsepower (selected by the manufacturer) and data from these tests were used in determining the horsepower to be developed in tests D and H, respectively. Tests C, D, E, G, and H were made with the same setting.

	<u>DRAWBAR</u>	<u>BELT</u>
2. Observed maximum horsepower (tests F & B)	28.14	34.54
3. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	29.49	36.23
4. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly A.S.A.E. and S.A.E. ratings)	22.12	30.80

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 345.

Carlton L. Zink  
Engineer-in-charge

E. E. Brackett

C. W. Smith

L. W. Hurlbut  
Board of Tractor Test Engineers