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January 1949

## Test 420: Intercontinental Model D-26

Nebraska Tractor Test Lab

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

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The Experiment Station  
University of Nebraska College of Agriculture  
W. V. Lambert, Director, Lincoln, Nebraska

Department of Agricultural Engineering

Dates of test: August 4 to August 13, 1949

Manufacturer: INTERCONTINENTAL MANUFACTURING COMPANY, INC., DALLAS, TEXAS

Manufacturer's rating: None

NEBRASKA TRACTOR TEST NO. 420

INTERCONTINENTAL D-26 OR DE

**BELT HORSE POWER TESTS**

H. P.	Crank shaft speed R.P.M.	Fuel Consumption			Water used Gal. per hour	Temp. Deg. F.		Barometer Inches of Mercury
		Gal. per hour	H.P. hr. per gal.	Lb. per H.P. hour		Cooling med.	Air	
TEST B and C—100% MAXIMUM LOAD—TWO HOURS								
28.86	1799	2.634	10.96	0.633	0.00	194	90	28.888
*TEST D—ONE HOUR								
26.05	1798	2.146	12.14	0.571	0.00	178	89	28.870
TEST E—VARYING LOAD—TWO HOURS (20 minute runs; last line average)								
25.98	1796	2.146	12.11	0.573	- - -	178	90	-- ---
2.40	1864	0.839	2.86	2.425	- - -	153	90	-- ---
13.36	1840	1.350	9.90	0.701	- - -	163	91	-- ---
28.21	1755	2.492	11.32	0.613	- - -	194	93	-- ---
6.75	1854	1.034	6.53	1.062	- - -	160	92	-- ---
19.71	1819	1.700	11.59	0.598	- - -	170	93	-- ---
16.07	1822	1.593	10.09	0.688	0.00	170	91	28.875

**DRAWBAR HORSE POWER TESTS**

H. P.	Draw bar pull Lbs.	Speed miles per hr.	Crank shaft speed R. P. M.	Slip of drive wheels %	Fuel Consumption			Water used Gal. per hr.	Temp. Deg. F.		Barometer Inches of Mercury
					Gal. per hour	Hp.-hr. per Gal.	Lb. per Hp. hr.		Cool- ing med.	Air	
TEST F and G 100% MAXIMUM LOAD—											
25.28	3406	2.78	1800	8.94	Not Recorded				182	83	28.895
26.11	2349	4.17	1799	5.50	" "				178	82	28.895
26.53	1681	5.92	1799	3.47	" "				178	78	28.870
22.63	705	12.04	1804	1.04	" "				182	87	28.895
					" "						
*TEST H—TEN HOURS— 2nd GEAR											
21.07	1852	4.27	1802	3.48	1.899	11.10	0.625	0.00	178	96	28.894
TEST J—100% MAXIMUM LOAD— 2nd GEAR											
20.85	2037	3.84	1802	15.30	Not Recorded				176	84	28.850
TEST K—100% MAXIMUM LOAD— 2nd GEAR											
*Wheels of lightest weight and smallest tires suggested by the manufacturer.											
18.87	1949	3.63	1799	16.35	Not Recorded				170	84	28.850

**TIRES, WHEELS and WEIGHT**

		Tests F, G & H		Test J	Test K
Rear Wheel: (each)	Type and Weight	Pressed Steel	Pressed Steel	Pressed Steel	
	Liquid Ballast	148 lb	None	None	
	Added Cast Iron	900 lb	None	None	
Rear Tires:	No., Size and Ply	2 11-38 4 ply	2 11-38 4 ply	2 10-38 4 ply	
	Type of Tread	Angle action	Angle action	Angle action	
	Makes	General	General	General	
Front Wheel: (each)	Type and Weight	Pressed Steel	Pressed Steel	Pressed Steel	
	Liquid Ballast	None	None	None	
	Added Cast Iron	174 lb	None	None	
Front Tires:	No., Size and Ply	2 5.50-16 4 ply	2 5.50-16 4 ply	2 5.50-16 4 ply	
	Type of Tread	R1b	R1b	R1b	
	Makes	General	General	General	
Height of Drawbar	Air Pressure	28 lb	28 lb	28 lb	
		17 inches	19 inches	17 1/2 inches	
Static Weight: Rear End		4370 lb	2274 lb	2198 lb	
	Front End	1546 lb	1198 lb	1195 lb	
Total Weight as Tested (With operator)		6091 lb	3647 lb	3578 lb	

FUEL, OIL and TIME Fuel: Diesel fuel, cetane 47 (Cetane rating taken from oil company's typical inspection data); weight per gallon 6.935 lbs. Oil: SAE 30; to motor 1.114 gals; drained from motor 0.852 gals. Total time motor was operated 43 hours.

SPECIFICATIONS Type Tricycle; Serial No. None; Drive enclosed gear; Tread Width, Rear 56" to 84"; Front 9"; Wheel Base 81". Hydraulic Lift Control. Yes. Advertised speeds, mph (at 1500 rpm): First 2.5; Second 3.5; Third 4.9; Fourth 9.8; Reverse 3.1. Belt Pulley: Diam. 10"; Face 6 1/2"; RPM 1457; Belt Speed 3814 fpm. Clutch: Make Rockford; Type dry disc; Operated by foot pedal. Seat pressed steel. Brakes: Make Wisconsin Axle; Type external and internal shoe; Location differential shaft; Gear Reduction (brake drum to rear wheel) 5.100:1; Operated by foot pedals; Locked by latches on tractor frame; Equalization None (brakes can be locked together) Each brake is actuated by spring cushioned linkage.

ENGINE Make Buda; Serial No. 45989; Type 4 cylinder vertical; Head I; Mounting crankshaft lengthwise; Lubrication pressure; Bore and Stroke 3 7/16" x 4 1/8"; Rated rpm 1800; Compression Ratio 15:1. Port Diameter Valves: Inlet 1 3/8"; Exhaust 1 1/8". Governor: Make Bosch; Type centrifugal, variable speed. Fuel Injection system Bosch. Starting System: Auto-Lite, 12 volt. Battery: X-Sel, 6 volt (2 used). Air Cleaner: Make United; Type oil washed wire screen. Oil Filter: Make Fram; Type by-pass with replaceable cartridge. Fuel Filter: Make Commercial (2 used); Type one replaceable element and one replaceable cartridge. Cooling medium temperature control: Thermostat.

REPAIRS AND ADJUSTMENTS A leak developed in the fuel line at the tank connection following Test "G".

REMARKS All test results were determined from observed data and without allowances, additions, or deductions. Tests B and F were made with fuel pumps set by manufacturer to develop approximately 29 observed belt horsepower 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, H, J and K were made with the same setting.

**HORSEPOWER SUMMARY**

	Draw- bar	Belt
1. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.)	27.60	30.74
2. Observed maximum horsepower (tests F & B)	26.11	28.86
3. Seventy-five per cent of calculated maximum drawbar horsepower and eighty-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings).	20.70	26.13

We, the undersigned, certify that this is a true and correct report of official tractor test No. 420.

L. F. Larsen  
Engineer in Charge

C. W. Smith  
F. D. Yung  
L. W. Hurlbut  
Board of Tractor  
Test Engineers

\* Formerly called RATED LOAD, see horsepower summary.