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Test 413 Oliver Standard 66

Nebraska Tractor Test Lab

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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—100% MAXIMUM LOAD—TWO HOURS								
24.90	1600	2.087	11.93	0.511	0.00	178	74	28.800
TEST C—OPERATING MAXIMUM LOAD—ONE HOUR								
23.99	1599	1.993	12.04	0.507	0.00	173	73	28.800
*TEST D—ONE HOUR								
22.31	1601	1.901	11.74	0.520	0.00	173	74	28.800
TEST E—VARYING LOAD—TWO HOURS (20 minute runs; last line average)								
22.29	1600	1.893	11.77	0.518	- - -	173	76	-- ---
1.64	1709	0.826	1.99	3.073	- - -	160	74	-- ---
11.72	1676	1.323	8.86	0.689	- - -	162	76	-- ---
22.95	1513	1.888	12.16	0.502	- - -	175	76	-- ---
5.89	1685	1.013	5.81	1.049	- - -	160	77	-- ---
17.28	1652	1.642	10.52	0.580	- - -	170	78	-- ---
13.63	1639	1.431	9.52	0.640	- - -	166	76	28.805

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—100% MAXIMUM LOAD— 3rd GEAR											
21.52	1821	4.43	1606	6.12	Not Recorded				170	69	28.725
TEST G—OPERATING MAXIMUM LOAD											
19.65	3065	2.40	1601	11.90	Not Recorded				182	90	28.800
20.60	2334	3.31	1603	8.20	" "				177	88	28.910
20.50	1732	4.44	1601	5.63	" "				179	86	28.825
20.96	1325	5.93	1600	4.41	" "				178	87	28.800
20.86	1103	7.09	1603	3.34	" "				178	83	28.825
17.80	538	12.41	1604	1.99	" "				185	91	28.800
*TEST H—TEN HOURS— 3rd GEAR											
16.96	1422	4.47	1598	4.81	1.729	9.81	0.622	0.00	176	86	28.610
TEST J—OPERATING MAXIMUM LOAD— 3rd GEAR											
18.81	1746	4.04	1603	15.73	Not Recorded				185	93	28.750
TEST K—OPERATING MAXIMUM LOAD— 3rd GEAR											
14.09	1453	3.64	1602	16.26	Not Recorded				175	92	28.715

Wheels of lightest weight and smallest tires suggested by the manufacturer.

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	52 lb.		None	None
	Added Cast Iron	118 1/2 lb.		None	None
Rear Tires:	No., Size and Ply	2 11-24 8 ply		2 11-24 8 ply	2 9-24 4 ply
	Type of Tread	H1 Cleat		H1 Cleat	Champion Ground Grip
	Make	B. F. Goodrich		B. F. Goodrich	Firestone
	Air Pressure	20 lb.		20 lb.	14 lb.
	Front Wheel: (each)	Pressed Steel		Pressed Steel	Pressed Steel
Front Wheel: (each)	Type and Weight	Pressed Steel		Pressed Steel	Pressed Steel
	Liquid Ballast	None		None	None
	Added Cast Iron	None		None	None
Front Tires:	No., Size and Ply	2 5.00 x 15 4 ply		2 5.00 x 15 4 ply	2 5.00 x 15 4 ply
	Type of Tread	Guide Grip		Guide Grip	Guide Grip
	Make	Firestone		Firestone	Firestone
	Air Pressure	28 lb.		28 lb.	28 lb.
	Height of Drawbar	20 3/4 inches		22 inches	19 1/2 inches
Static Weight:	Rear End	4257 lb.		1785 lb.	1578 lb.
	Front End	1170 lb.		1167 lb.	1166 lb.
Total Weight as Tested (With operator)		5602 lb.		3127 lb.	2919 lb.

FUEL, OIL and TIME--Fuel: Gasoline, octane 74 (octane rating taken from oil company's typical inspection data); weight per gallon 6.101 lbs. Oil: SAE 10-10W; to motor 1.013 gal.; drained from motor 0.726 gals. Total time motor was operated 73 hours.

SPECIFICATIONS--Type--Standard; Serial No. 47003. Drive--enclosed gear. Tread width: rear 49 3/4" or 59 3/4"; front 46" or 51"; wheel base 73 1/2". Advertised speeds, miles per hour: First 2 1/2; second 3 1/4; third 4 3/8; fourth 5 3/4; fifth 6 3/4; sixth 11 5/8; reverse 2 5/8 and 4 1/2. Belt pulley: Diam. 11 7/8"; face 7 1/4"; rpm 987; belt speed 3065 fpm. Clutch: Make--Borg & Beck; type--single plate; operated by foot pedal. Seat--pressed steel, cushioned by rubber in torsion. Hydraulic control not available. Brakes: make--own; type--external contracting bands. Location--mounted on bull gear pinions. Gear reduction (brake drum to rear wheel) 4.692 to 1. Operated by two foot pedals; locked by latches. Equalization--yes, equalizer bar serves as master brake pedal.

ENGINE--Make--own; Serial No. G2-771681; type--4 cylinder vertical. Head--I; mounting --lengthwise; lubrication--pressure. Bore & stroke 3 5/16" x 3 3/4"; rated rpm--1600; compression ratio--6.75:1. Port diameter valves: Inlet 1 3/16"; exhaust 1". Starter: Make--Delco-Remy. Distributor and Coil: Make--Delco-Remy. Battery: Delco 6-volt. Carburetor: Make--Marvel-Schebler; model--TSX363; size--7/8". Governor: Make--own; type--centrifugal, variable speed. Air Cleaner: Make--Donaldson; type--oil washed wire screen. Oil Filter: Make--Michiana; type--replaceable, waste-packed element. Cooling medium temperature control--Thermostat.

REPAIRS AND ADJUSTMENTS--No repairs or adjustments.

REMARKS--All test results were determined from observed data and without allowances, additions or deductions. Tests B and F were made with carburetor set for 100% maximum 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 an operating setting of the carburetor (selected by the manufacturer) of 96.3% of maximum belt horsepower.

HORSEPOWER SUMMARY

	Draw- bar	Belt
1. Sea level (calculated) maximum horsepower (based on 60° F. and 29.92" Hg.).	22.61	26.21
2. Observed maximum horsepower (tests F and B)	21.52	24.90
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).	16.96	22.28

We, the undersigned certify that this is a true and correct report of official tractor test No. 413.

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.

