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11-13-1950

Test 454: Dodge Power Wagon T137

Nebraska Tractor Test Lab

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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: November 13 to November 21, 1950.
Manufacturer: CHRYSLER CORPORATION, DETROIT, MICHIGAN
Manufacturer's rating: Not rated.

NEBRASKA TRACTOR TEST NO. 454

DODGE POWER WAGON T137

BELT HORSEPOWER TESTS

Hp	Crank shaft speed rpm	Fuel Consumption			Water used gal per hour	Temp Deg F		Barometer in Hg
		Gal per hour	Hp-hr per gal	Lb per hp-hour		Cooling med	Air	
TESTS B and C—100% MAXIMUM LOAD—TWO HOURS								
42.40	1701	4.914	8.63	0.704	0.00	163	54	29.153
TEST D—RATED LOAD—ONE HOUR								
36.77	1700	4.614	7.97	0.763	0.00	159	53	29.193
TEST E—VARYING LOAD—TWO HOURS (20 minute runs; last line average)								
36.77	1699	4.616	7.97	0.763	...	158	53
2.44	1909	1.649	1.48	4.107	...	150	55
19.89	1826	2.676	7.43	0.817	...	154	55
38.50	1532	4.453	8.65	0.703	...	163	55
10.22	1877	2.083	4.91	1.239	...	152	57
28.92	1777	3.757	7.70	0.789	...	158	57
22.79	1770	3.206	7.11	0.855	0.00	156	55	29.220

DRAWBAR HORSEPOWER TESTS

Hp	Draw bar pull lb	Speed miles per hr	Crank shaft speed rpm	Slip of drive wheels %	Fuel Consumption			Water used gal per hour	Temp Deg F		Barometer in Hg
					Gal per hour	Hp-hr per gal	Lb per hp-hr		Cooling med	Air	
TESTS F and G—100% MAXIMUM LOAD											
35.01	6480	2.03	1700	12.82	Not Recorded				158	59	28.875
39.96	3468	4.32	1696	4.91	" "				159	49	29.180
40.02	3267	4.59	1699	4.40	" "				158	50	29.180
39.96	1738	8.62	1699	2.14	' "				157	47	29.180
39.95	1624	9.22	1700	2.14	" "				157	48	29.180
36.69	804	17.11	1700	1.29	" "				158	58	28.910
TEST H—RATED LOAD—TEN HOURS—2nd GEAR											
30.64	2615	4.39	1701	3.59	4.347	7.05	0.862	0.00	154	48	28.930
TEST J—OPERATING MAXIMUM LOAD—2nd GEAR											
38.09	3333	4.29	1705	7.16	Not Recorded				157	48	28.870

TIRES, WHEELS and WEIGHT

	Tests F, G, & H	Test J	Test K
Rear wheels			
Type	Pressed steel	Pressed steel	
Liquid ballast	None	None	
Added cast iron	1057 lb each	None	
Rear tires			
No. and size	Two 9:00-16	Two 9:00-16	
Ply	8	8	
Air pressure	45 lb.	40 lb	
Front wheels			
Type	Pressed Steel	Pressed steel	
Liquid ballast	None	None	
Added cast iron	594 lb each	None	
Front tires			
No. and size	Two 9:00-16	Two 9:00-16	
Ply	8	8	
Air pressure	45 lb	45 lb	
Height of drawbar	16½ inches	19½ inches	
Static weight			
Rear end	4500 lb	2387 lb	
Front end	4425 lb	3237 lb	
Total weight as tested with operator	9110 lb	5809 lb	

FUEL, OIL and TIME Gasoline octane No ASTM 76 Research 82 (rating taken from oil company's typical inspection data); weight per gallon 6.077 lb Oil SAE 30; to motor 1.202 gal; drained from motor 1.005 gal Total time motor was operated 39 hours.

CHASSIS Type standard Serial No 83920188 Tread width rear 64¾" front 64¾" Wheel Base 126" Hydraulic control system none available Advertised speeds mph at 3200 rpm first 4 second 8 third 9 fourth 18 fifth 16 sixth 32 seventh 28 eighth 54 reverse 4 and 7 Belt pulley diam 9" face 6¾" rpm 1500 Belt speed 3500 fpm Clutch single plate operated by foot pedal Seat upholstered automotive type seat Brakes two internal expanding shoes operated by foot pedal and emergency transmission hand brake can be locked Equalized by 4 wheel hydraulic Power take-off available as extra equipment.

ENGINE Make Chrysler Type 6 cylinder vertical Serial No T137-20265 Crankshaft mounted lengthwise Head L Lubrication pressure Bore and Stroke 3¼"x4¼" Rated rpm 1700 Compression ratio 6.7 to 1 Displacement 230.2 cu in Port Diameter Valves inlet 1 5/16" exhaust 1¼" Governor variable speed centrifugal Carburetor Size 1½" Ignition System 6 volt Starting System 6 volt Air Cleaner cattle hair oil bath Muffler was used Oil Filter replaceable waste element Cooling medium temperature control thermostat.

REPAIRS AND ADJUSTMENTS No repairs or adjustments.

REMARKS All test results were determined from 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 and J were made with the same carburetor setting. Oil leaked from belt pulley housing during belt test.

HORSEPOWER SUMMARY

	Draw-bar	Belt
1. Sea level (calculated) maximum horsepower (based on 60° F and 29.92" Hg)	40.54	43.26
2. Observed maximum horsepower (tests F & B)	39.96	42.40
3. Seventy-five per cent of calculated maximum drawbar horsepower and eight-five per cent of calculated maximum belt horsepower (formerly ASAE and SAE ratings)	30.41	36.77

We, the undersigned, certify that this is a true and correct report of official tractor test No. 454.

L. F. Larsen
Engineer in Charge

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

