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January 1927

## Test 147: Monarch 6 ton

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

Copy of Report of Official Tractor Test No. 147.

Dates of test: November 14th to November 24th, 1927

Name, model and rating of tractor: Monarch 6 ton

Serial No. Engine: 60172      Serial No. Chassis: 60172

Manufacturer: Monarch Tractors Corporation, Springfield, Illinois

Tractor equipment used: American Bosch "ZR4Ed26" Mag., Zenith "77" carburetor

Style and dimensions of wheel lugs: Angle casting 31 per track 2" high x 8" wide.

BRAKE HORSE POWER TESTS

NO BELT TESTS

REMARKS: The gasoline used as fuel in these tests weighed 6.19 pounds per gallon.

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DRAWBAR HORSE POWER TESTS

	:Draw	:Speed	:Crank	:Slip	:Fuel Consumption	:Water	:Temp. Deg. F. :						
H. P.	:Bar	:Miles	:Shaft	: on	: Kind :Lmt. :H. P. :Used	:Used	:Cooling : Air	:Humidity	:Average	:Height of			
Dev.	:Pull	:Per	:Speed	: drive	: Used :per :hrs. :per	:per	: Fluid :			:Barometer			
	:Pounds	:Hour	:R.P.M.:	:Wheels :	:hour :per :hour	:Gals. :Gal. :Gals.	: * :			:Inches			
	:	:	:	: % :	:	:	:	:	:	:	:	:	:

RATED LOAD TEST. TEN HOURS

40.59	: 5450	: 2.79	: 982	: 1.48	: Gaso. :5.4995:	7.38	: 0.08	:	154	: 41	: 59	:	28.97
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MAXIMUM LOAD TEST

49.07	: 6580	: 2.80	: 1006	: 1.96	: Gaso. : -- NOT RECORDED --	:	181	: 56.5:	52	:	28.43		
50.55	: 10537	: 1.80	: 998	: 3.89	: Gaso. : -- NOT RECORDED --	:	190	: 54	: 52	:	28.43		
47.55	: 4402.5	: 4.05	: 993	: 0.89	: Gaso. : -- NOT RECORDED --	:	181	: 60	: 52	:	28.43		

\*Taken in discharge line from engine.

REMARKS: The rated load and first maximum tests were made in intermediate gear; the second maximum test was made in low gear; the third maximum test was made in high gear. The distance advanced by the tractor without load on level ground for several complete revolutions of the tracks was taken as a basis for calculating the slippage.

OIL CONSUMPTION:

During the complete test consisting of about 24 hours running the following oil was used:  
For the engine: 3 gallons of Mobiloil "B". 3 gallons to fill the crankcase, none added during test.  
For the transmission and track: 3 gallons of 600W were added during the test.

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REPAIRS AND ADJUSTMENTS

It was necessary to adjust the water pump packing gland several times during the test. It was still leaking somewhat at the end of the test.

No other repairs or adjustments were necessary during this test. At the end of the test the tractor was in good running order and there were no indications of undue wear nor of any weakness which might require early repair.

BRIEF SPECIFICATIONS

MOTOR: Stearns, 4 cylinder, vertical, valve-in-head, mounted crankshaft lengthwise. Bore, 5-1/8"; stroke, 6-1/2". Rated speed 1000 R.P.M.

Magneto: American Bosch "ZR4Ed26".

Carburetor: Zenith "77".

Governor: Pierce fly-ball type.

Air cleaner: United dry centrifugal type.

CHASSIS: Tracklayer, 2 tracks, partly enclosed final drive, enclosed gear transmission, chain and sprocket final drive. Clutch own make twin disc type. Advertised speeds: Low, 1.86 miles per hour; Intermediate, 2.82 miles per hour; High, 4.07 miles per hour; Reverse, 3.26 miles per hour.

Total weight as tested (with operator) 13,755 pounds.

REMARKS

In the advertising literature submitted with the application for test of this tractor, we find some claims and statements which cannot be directly compared with the results of this test as reported above. It is our opinion that none of these are excessive or unreasonable.

In order to conform to the provisions of the tractor rating code of the American Society of Agricultural Engineers and the Society of Automotive Engineers, the drawbar horse power rating of this tractor should not exceed 38 HORSE POWER.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 147.

Lew Wallace  
Engineer-in-Charge

Oscar W. Sjogren

E. E. Brackett

C. W. Smith

Board of Tractor Test Engineers