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Tractor Test and Power Museum, The Lester F.
Larsen

January 1934

Test 226: Caterpillar Model 22

Nebraska Tractor Test Lab

University of Nebraska-Lincoln, tractortestlab@unl.edu

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UNIVERSITY OF NEBRASKA - AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 226

Dates of test: September 25 to October 9, 1934.
 Name and model of tractor: "CATERPILLAR" "TWENTY-TWO"
 Manufacturer: Caterpillar Tractor Company, Peoria, Illinois.
 Manufacturer's rating: NOT RATED.
 Highest rating permissible under the recommendations of the A.S.A.E. and
 S.A.E. Tractor Rating Codes: Drawbar - 18.86 H.P. Belt - 26.75 H.P.
 One carburetor setting (96.5% of maximum) was used thruout this test.

B R A K E H O R S E P O W E R T E S T S

| H. P. | :Crank : :shaft : | Fuel Consumption :Gals. : H.P. :Lbs. @ | :Cool- : In : | Water consumption : per hour gallons | : Cool- : ing | Temp. : Deg. F. | :Barometer :Inches of :Mercury |
|-------|----------------------|---|---------------|---|---------------|--------------------|--------------------------------------|
|-------|----------------------|---|---------------|---|---------------|--------------------|--------------------------------------|

OPERATING MAXIMUM LOAD TEST. ONE HOUR

| | | | | | | | | | | |
|-------|--------|---------|--------|---------|---------|---------|---------|-------|------|----------|
| 29.36 | : 1252 | : 2.970 | : 9.89 | : 0.703 | : 0.000 | : 0.000 | : 0.000 | : 187 | : 73 | : 29.050 |
|-------|--------|---------|--------|---------|---------|---------|---------|-------|------|----------|

RATED LOAD TEST. ONE HOUR

| | | | | | | | | | | |
|-------|--------|---------|---------|---------|---------|---------|---------|-------|------|----------|
| 26.87 | : 1250 | : 2.607 | : 10.31 | : 0.674 | : 0.000 | : 0.000 | : 0.000 | : 189 | : 78 | : 29.005 |
|-------|--------|---------|---------|---------|---------|---------|---------|-------|------|----------|

*VARYING LOAD TEST. TWO HOURS

| | | | | | | | | | | |
|-------|--------|---------|---------|----------|---------|---------|---------|-------|------|----------|
| 26.50 | : 1245 | : 2.573 | : 10.30 | : 0.675 | : -- | : -- | : -- | : 189 | : 79 | : -- |
| 0.59 | : 1310 | : 1.148 | : 0.51 | : 13.525 | : -- | : -- | : -- | : 179 | : 82 | : -- |
| 13.54 | : 1266 | : 1.791 | : 7.56 | : 0.919 | : -- | : -- | : -- | : 181 | : 78 | : -- |
| 27.22 | : 1178 | : 2.780 | : 9.79 | : 0.710 | : -- | : -- | : -- | : 198 | : 85 | : -- |
| 6.81 | : 1280 | : 1.483 | : 4.65 | : 1.493 | : -- | : -- | : -- | : 180 | : 83 | : -- |
| 19.85 | : 1255 | : 2.236 | : 8.88 | : 0.783 | : -- | : -- | : -- | : 184 | : 83 | : -- |
| 15.75 | : 1255 | : 1.999 | : 7.88 | : 0.882 | : 0.000 | : 0.000 | : 0.000 | : 185 | : 81 | : 28.990 |

*20 minute runs. Last line is average for two hours.

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 : | :Speed : :miles : :per : | :Crank : :shaft : :speed : | :Slip : :on : | :Fuel Consumption :Gal. : hr. : per | :Water: :used : | Temp. :Cool-:Air | :Barometer :Inches of :Mercury |
|-------|-------------------|--------------------------------|----------------------------------|------------------|--|--------------------|---------------------|--------------------------------------|
|-------|-------------------|--------------------------------|----------------------------------|------------------|--|--------------------|---------------------|--------------------------------------|

RATED LOAD TEST. TEN HOURS. SECOND GEAR.

| | | | | | | | | | | | |
|-------|--------|--------|--------|--------|---------|--------|---------|---------|-------|------|----------|
| 19.08 | : 2806 | : 2.55 | : 1250 | : 1.75 | : 2.355 | : 8.10 | : 0.858 | : 0.000 | : 188 | : 66 | : 28.750 |
|-------|--------|--------|--------|--------|---------|--------|---------|---------|-------|------|----------|

MAXIMUM LOAD TEST

| | | | | | | | | | |
|-------|--------|--------|--------|--------|----------------------------|--|-------|------|----------|
| 23.43 | : 4534 | : 1.94 | : 1248 | : 2.84 | :-----: Not Recorded:----- | | : 190 | : 81 | : 28.655 |
| 22.32 | : 3294 | : 2.54 | : 1243 | : 1.75 | :-----: " " :----- | | : 186 | : 74 | : 28.700 |
| 20.88 | : 2214 | : 3.54 | : 1251 | : 1.50 | :-----: " " :----- | | : 193 | : 85 | : 28.665 |

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 2 F 1117 Type 4 Cylinder, Vertical

Head I Mounting Lengthwise

Bore and stroke: 4" x 5" Rated R.P.M. 1250

Port Dia. Valves: Inlet 1 1/2" Exhaust 1 5/16"

Belt pulley: Diam. 10 1/2" Face 6 1/2" R.P.M. 950

Magneto: Eisemann Model CT4

Carburetor: Zenith Model K 5 A Size 1 1/4"

Governor: Own No. None Type Flyball

Air Cleaner: Own under Vortox patents Type Combination centrifugal,
oil and matted wire

Lubrication: Pressure

CHASSIS: Type Tracklayer Serial No. 2 F 1117 Drive Enclosed gear

Clutch: Own Type Single plate - dry operated by foot

Advertised speeds, miles per hour: Low 2.0

Intermediate 2.6 High 3.6 Reverse 2.1

Measured length of track: 15.412 feet Face 10 inches

Lugs: Type Cleats integral with shoes No. per track 30 Size 10" x 1 1/2"

Extension rims: None

Seat: Upholstered

Total weight as tested (with operator) 6,605 pounds.

FUEL AND OIL:

Fuel: Distillate Weight per gallon 6.95 pounds

Oil: S.A.E. Viscosity No. 30

The oil was drained
once - at the end of
the test.

Total oil to motor 2.506 gallons

Total drained from motor 2.485 gallons

Total time motor was operated 48 hours

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REPAIRS AND ADJUSTMENTS

No repairs or adjustments.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

The track and lug equipment used in the drawbar tests is the same as that described on page 2 of this report.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

We, the undersigned, certify that the above is a true and correct report of official tractor test No. 226.

Carlton L. Zink

Engineer-in-charge

E. E. Brackett

C. W. Smith

E. B. Lewis

Board of Tractor Test Engineers