

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Nebraska Tractor Tests

Tractor Test and Power Museum, The Lester F. Larsen

---

January 1970

## Test 1053: Ford 2000 Diesel 6-Speed (All Purpose)

Nebraska Tractor Test Lab

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

Follow this and additional works at: <https://digitalcommons.unl.edu/tractormuseumlit>



Part of the [Energy Systems Commons](#), [History of Science, Technology, and Medicine Commons](#), [Other Mechanical Engineering Commons](#), [Physical Sciences and Mathematics Commons](#), [Science and Mathematics Education Commons](#), and the [United States History Commons](#)

---

Nebraska Tractor Test Lab, "Test 1053: Ford 2000 Diesel 6-Speed (All Purpose)" (1970). *Nebraska Tractor Tests*. 1386.

<https://digitalcommons.unl.edu/tractormuseumlit/1386>

This Article is brought to you for free and open access by the Tractor Test and Power Museum, The Lester F. Larsen at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Tractor Tests by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

# NEBRASKA TRACTOR TEST 1053 – FORD 2000 DIESEL 6-SPEED (ALL-PURPOSE)

## POWER TAKE-OFF PERFORMANCE

| Hp  | Crank-<br>shaft<br>speed<br>rpm | Fuel Consumption<br>Gal<br>per<br>hr | Lb<br>per<br>hp-hr | Hp-hr<br>per<br>gal | Temperature<br>Cooling<br>medium | Degrees F<br>Air<br>wet<br>bulb | Air<br>dry<br>bulb | Barometer<br>inches of<br>Mercury |
|---|---------------------------------|--------------------------------------|--------------------|---------------------|----------------------------------|---------------------------------|--------------------|-----------------------------------|
| <b>MAXIMUM POWER AND FUEL CONSUMPTION</b>               |                                 |                                      |                    |                     |                                  |                                 |                    |                                   |
| <b>Rated Engine Speed—Two Hours (PTO Speed—597 rpm)</b> |                                 |                                      |                    |                     |                                  |                                 |                    |                                   |
| 31.97   | 2001                            | 2.008                                | 0.433              | 15.92               | 200                              | 59                              | 75                 | 29.113                            |
| <b>Standard Power Take-off Speed (540 rpm)—One Hour</b> |                                 |                                      |                    |                     |                                  |                                 |                    |                                   |
| 30.05   | 1811                            | 1.853                                | 0.425              | 16.22               | 201                              | 58                              | 75                 | 29.145                            |
| <b>VARYING POWER AND FUEL CONSUMPTION—Two Hours</b>     |                                 |                                      |                    |                     |                                  |                                 |                    |                                   |
| 29.57   | 2175                            | 1.894                                | 0.441              | 15.61               | 191                              | 58                              | 75                 | .....                             |
| 0.00  | 2259                            | 0.679                                | .....              | .....               | 171                              | 58                              | 75                 | .....                             |
| 15.00   | 2205                            | 1.267                                | 0.582              | 11.84               | 173                              | 58                              | 75                 | .....                             |
| 31.96   | 2002                            | 2.011                                | 0.434              | 15.89               | 198                              | 58                              | 75                 | .....                             |
| 7.58  | 2231                            | 0.958                                | 0.871              | 7.91                | 172                              | 57                              | 74                 | .....                             |
| 22.21   | 2177                            | 1.559                                | 0.484              | 14.25               | 175                              | 57                              | 74                 | .....                             |
| Av 17.72  | 2175                            | 1.395                                | 0.542              | 12.70               | 180                              | 58                              | 75                 | 29.140                            |

## DRAWBAR PERFORMANCE

| Hp | Draw-<br>bar<br>pull<br>lbs | Speed<br>miles<br>per<br>hr | Crank-<br>shaft<br>speed<br>rpm | Slip of<br>drivers<br>% | Fuel Consumption<br>Gal<br>per<br>hr | Lb<br>per<br>hp-hr | Hp-hr<br>per<br>gal | Temp<br>Cool-<br>ing<br>med | Degrees F<br>Air<br>wet<br>bulb | Air<br>dry<br>bulb | Barometer<br>inches of<br>Mercury |
|----|-----------------------------|-----------------------------|---------------------------------|-------------------------|--------------------------------------|--------------------|---------------------|-----------------------------|---------------------------------|--------------------|-----------------------------------|
|----|-----------------------------|-----------------------------|---------------------------------|-------------------------|--------------------------------------|--------------------|---------------------|-----------------------------|---------------------------------|--------------------|-----------------------------------|

### VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST

|  |      |      |      |      |       |       |       |     |    |    |        |
|--|------|------|------|------|-------|-------|-------|-----|----|----|--------|
| <b>Maximum Available Power—Two Hours—3rd Gear</b>      |      |      |      |      |       |       |       |     |    |    |        |
| 27.04  | 2572 | 3.94 | 1995 | 6.94 | 2.007 | 0.511 | 13.47 | 205 | 69 | 82 | 28.510 |
| <b>75% of Pull at Maximum Power—Ten Hours—3rd Gear</b> |      |      |      |      |       |       |       |     |    |    |        |
| 22.90  | 1955 | 4.39 | 2178 | 5.02 | 1.792 | 0.539 | 12.78 | 174 | 65 | 71 | 28.556 |
| <b>50% of Pull at Maximum Power—Two Hours—3rd Gear</b> |      |      |      |      |       |       |       |     |    |    |        |
| 16.25  | 1349 | 4.52 | 2208 | 3.60 | 1.487 | 0.631 | 10.93 | 172 | 64 | 79 | 28.520 |

### MAXIMUM POWER WITH BALLAST

|       |      |      |      |       |          |       |     |    |    |        |
|-------|------|------|------|-------|----------|-------|-----|----|----|--------|
| 16.00 | 4452 | 1.35 | 2207 | 14.87 | 1st Gear | ..... | 177 | 68 | 78 | 28.550 |
| 25.41 | 4320 | 2.21 | 1997 | 13.83 | 2nd Gear | ..... | 189 | 69 | 80 | 28.550 |
| 27.44 | 2604 | 3.95 | 2001 | 7.01  | 3rd Gear | ..... | 200 | 68 | 79 | 28.580 |
| 27.49 | 1876 | 5.50 | 1998 | 4.76  | 4th Gear | ..... | 193 | 69 | 82 | 28.580 |
| 27.48 | 1404 | 7.34 | 2003 | 3.74  | 5th Gear | ..... | 189 | 69 | 81 | 28.570 |

### MAXIMUM PULL WITHOUT BALLAST

|       |      |      |      |       |          |       |     |    |    |        |
|-------|------|------|------|-------|----------|-------|-----|----|----|--------|
| 20.73 | 3256 | 2.39 | 2188 | 14.92 | 2nd Gear | ..... | 172 | 46 | 53 | 28.825 |
|-------|------|------|------|-------|----------|-------|-----|----|----|--------|

### VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST—3rd Gear

|                      |       |       |       |       |       |       |
|----------------------|-------|-------|-------|-------|-------|-------|
| Pounds Pull          | 2604  | 2667  | 2794  | 2873  | 2820  | 2708  |
| Horsepower           | 27.44 | 25.30 | 23.57 | 21.05 | 17.70 | 14.14 |
| Crankshaft Speed rpm | 2001  | 1805  | 1610  | 1403  | 1200  | 994   |
| Miles Per Hour       | 3.95  | 3.56  | 3.16  | 2.75  | 2.35  | 1.96  |
| Slip of Drivers %    | 7.01  | 7.22  | 7.42  | 7.83  | 7.62  | 7.32  |

### TIRES, BALLAST and WEIGHT

|                                  |                      | With Ballast       | Without Ballast    |
|----------------------------------|----------------------|--------------------|--------------------|
| Rear tires                       | —No, size, ply & psi | Two 12.4-28; 4; 16 | Two 12.4-28; 4; 12 |
| Ballast                          | —Liquid              | 428 lb each        | None               |
|                                  | —Cast iron           | 420 lb each        | None               |
| Front tires                      | —No, size, ply & psi | Two 5.50-16; 4; 36 | Two 5.50-16; 4; 36 |
| Ballast                          | —Liquid              | 13 lb each         | None               |
|                                  | —Cast iron           | 90 lb each         | None               |
| Height of drawbar                |                      | 25 inches          | 26 inches          |
| Static weight with operator—Rear |                      | 4150 lb            | 2455 lb            |
|                                  | Front                | 1850 lb            | 1645 lb            |
|                                  | Total                | 6000 lb            | 4100 lb            |

Department of Agricultural Engineering

Dates of Test: September 29 to October 10, 1970

Manufacturer: Ford Motor Company, Birmingham, Michigan

**FUEL, OIL and TIME** Fuel No 2 Diesel Cetane No 53.5 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.8276 Weight per gallon 6.891 lb Oil SAE 20-20W API service classification MS, DS To motor 1.446 gal Drained from motor 1.261 gal Transmission and final-drive lubricant Ford oil M-2C53-A Total time engine was operated 47½ hours.

**ENGINE** Make Ford Diesel Type 3 cylinder vertical Serial No B 210245 Crankshaft mounted lengthwise Rated rpm 2000 Bore and stroke 4.2" x 3.8" Compression ratio 17.5 to 1 Displacement 158 cu in Cranking system 12 volt electric Lubrication pressure Air cleaner Oil washed wire mesh Oil filter full flow replaceable cotton blend cartridge Fuel filter one replaceable paper element and nylon screen in fuel tank Muffler was used Cooling medium temperature control thermostat.

**CHASSIS** Type Standard Serial No C-279889 Tread width rear 52" to 76" front 52" to 80" Wheel base 75.8" Center of gravity (without operator or ballast, with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 32.8" Vertical distance above roadway 25.2" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio Advertised speeds mph first 1.4 second 2.6 third 4.2 fourth 5.8 fifth 7.6 sixth 17.4 reverse 2.4 and 7.0 Clutch single plate dry disc with cerametallic buttons operated by foot pedal Brakes internal expanding shoe operated by two foot pedals that can be locked Steering mechanical with power assist Turning radius (on concrete surface with brake applied) right 117" left 117" (on concrete surface without brake 129" left 129" Turning space diameter (on concrete surface with brake applied) right 240" left 240" (on concrete surface without brake) right 267" left 267" Belt pulley 1113 rpm at 2000 engine rpm diam 10¼" face 6½" Belt speed 2986 fpm Power take-off 537 rpm at 1800 engine rpm.

**REPAIRS and ADJUSTMENTS:** No repairs or adjustments.

**REMARKS:** All test results were determined from observed data obtained in accordance with the SAE and ASAE test code. Sixth gear was not run as it exceeded 15 m.p.h.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1053.

L. F. LARSEN  
Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman  
W. E. SPLINTER  
D. E. LANE  
Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station  
E. F. Frolik, Dean; H. W. Ottoson, Director; Lincoln, Nebraska