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January 1973

## Test 1124: International 1066 Turbo Diesel 16-Speed (Chassis S/ N 2610154U023000 and up)

Nebraska Tractor Test Lab

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

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# NEBRASKA TRACTOR TEST 1124 — INTERNATIONAL 1066 TURBO DIESEL 16 SPEED

## CHASSIS SN 2610154U023000\* and up

### 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—1146 rpm)</b> |                                 |                                      |                    |                     |                                  |                                 |                    |                                   |
| 125.68   | 2601                            | 8.419                                | 0.468              | 14.93               | 193                              | 63                              | 77                 | 28.743                            |
| <b>Standard Power Take-off Speed—(1000 rpm)—One Hour</b> |                                 |                                      |                    |                     |                                  |                                 |                    |                                   |
| 119.20   | 2270                            | 7.283                                | 0.427              | 16.37               | 186                              | 63                              | 74                 | 28.735                            |
| <b>VARYING POWER AND FUEL CONSUMPTION—Two Hours</b>      |                                 |                                      |                    |                     |                                  |                                 |                    |                                   |
| 109.85   | 2672                            | 7.816                                | 0.497              | 14.05               | 187                              | 66                              | 76                 | .....                             |
| 0.00   | 2849                            | 3.175                                | .....              | .....               | 170                              | 63                              | 74                 | .....                             |
| 56.79  | 2762                            | 5.392                                | 0.663              | 10.53               | 177                              | 65                              | 75                 | .....                             |
| 125.79   | 2600                            | 8.422                                | 0.467              | 14.94               | 187                              | 62                              | 77                 | .....                             |
| 28.98  | 2818                            | 4.413                                | 1.063              | 6.57                | 170                              | 62                              | 74                 | .....                             |
| 83.86  | 2717                            | 6.591                                | 0.549              | 12.72               | 179                              | 64                              | 74                 | .....                             |
| Av. 67.55  | 2736                            | 5.968                                | 0.617              | 11.32               | 179                              | 64                              | 75                 | 28.733                            |

### 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 |
|--|-----------------------------|-----------------------------|---------------------------------|-------------------------|--------------------------------------|--------------------|---------------------|-----------------------------|---------------------------------|--------------------|-----------------------------------|
| <b>VARYING DRAWBAR POWER AND FUEL CONSUMPTION WITH BALLAST</b>           |                             |                             |                                 |                         |                                      |                    |                     |                             |                                 |                    |                                   |
| <b>Maximum Available Power—Two Hours—8th Gear (1 Hi TA)</b>              |                             |                             |                                 |                         |                                      |                    |                     |                             |                                 |                    |                                   |
| 105.95   | 7351                        | 5.40                        | 2597                            | 5.16                    | 8.289                                | 0.546              | 12.78               | 176                         | 48                              | 56                 | 29.040                            |
| <b>75% of Pull at Maximum Power—Ten Hours—8th Gear (1 Hi TA)</b>         |                             |                             |                                 |                         |                                      |                    |                     |                             |                                 |                    |                                   |
| 87.02  | 5721                        | 5.70                        | 2703                            | 3.94                    | 7.268                                | 0.583              | 11.97               | 176                         | 59                              | 63                 | 28.720                            |
| <b>50% of Pull at Maximum Power—Two Hours—8th Gear (1 Hi TA)</b>         |                             |                             |                                 |                         |                                      |                    |                     |                             |                                 |                    |                                   |
| 60.12  | 3810                        | 5.92                        | 2758                            | 2.28                    | 6.015                                | 0.698              | 9.99                | 173                         | 57                              | 63                 | 28.760                            |
| <b>50% of Pull at Reduced Engine Speed—Two Hours—12th Gear (2 Hi DD)</b> |                             |                             |                                 |                         |                                      |                    |                     |                             |                                 |                    |                                   |
| 59.40  | 3786                        | 5.88                        | 1606                            | 2.24                    | 4.153                                | 0.488              | 14.30               | 177                         | 59                              | 70                 | 28.770                            |
| <b>MAXIMUM POWER WITH BALLAST</b>  |                             |                             |                                 |                         |                                      |                    |                     |                             |                                 |                    |                                   |
| 84.86  | 13000                       | 2.45                        | 2680                            | 14.79                   | 4th Gear (2 Lo DD)                   | 183                | 63                  | 76                          | 28.700                          |                    |                                   |
| 105.04   | 8700                        | 4.53                        | 2598                            | 6.35                    | 6th Gear (3 Lo DD)                   | 175                | 48                  | 55                          | 29.040                          |                    |                                   |
| 108.73   | 7553                        | 5.40                        | 2599                            | 5.46                    | 8th Gear (1 Hi TA)                   | 175                | 48                  | 55                          | 29.040                          |                    |                                   |
| 105.55   | 6419                        | 6.17                        | 2601                            | 4.48                    | 9th Gear (4 Lo DD)                   | 176                | 48                  | 57                          | 29.040                          |                    |                                   |
| 108.87   | 5805                        | 7.03                        | 2598                            | 3.86                    | 10th Gear (1 Hi DD)                  | 174                | 49                  | 58                          | 29.040                          |                    |                                   |
| 107.95   | 5536                        | 7.31                        | 2600                            | 3.63                    | 11th Gear (2 Hi TA)                  | 174                | 49                  | 58                          | 29.020                          |                    |                                   |

### VARYING DRAWBAR PULL AND TRAVEL SPEED WITH BALLAST— 8th Gear (1 Hi TA)

|                      |        |        |       |       |       |       |
|----------------------|--------|--------|-------|-------|-------|-------|
| Pounds Pull          | 7553   | 8224   | 8750  | 9036  | 9656  | 9162  |
| Horsepower           | 108.73 | 105.87 | 99.31 | 89.60 | 81.82 | 64.87 |
| Crankshaft Speed rpm | 2599   | 2336   | 2070  | 1814  | 1562  | 1298  |
| Miles Per Hour       | 5.40   | 4.83   | 4.26  | 3.72  | 3.18  | 2.66  |
| Slip of Drivers %    | 5.46   | 5.91   | 6.35  | 6.65  | 7.52  | 7.02  |

### TRACTOR SOUND LEVEL WITH CAB

|   |      |
|---|------|
| Maximum Available Power 2 Hours             | 88.0 |
| 75% of Pull at Max. Power 10 Hours          | 88.5 |
| 50% of Pull at Max. Power 2 Hours           | 88.5 |
| 50% of Pull at Reduced Engine Speed 2 Hours | 89.5 |
| Bystander 16th (4 Hi DD)                    | 86.5 |

### TIRES, BALLAST AND WEIGHT

|   | With Ballast         | Without Ballast   |
|---|----------------------|-------------------|
| <b>Rear Tires</b>                       |                      |                   |
| Ballast                                 | —No, size, ply & psi | Four 18.4-38;8;12 |
|   | —Liquid              | 484 lb each       |
|   | —Cast iron           | None              |
| <b>Front tires</b>                      |                      |                   |
| Ballast                                 | —No, size, ply & psi | Two 11L-15;8;28   |
|   | —Liquid              | None              |
|   | —Cast iron           | 5 lb each         |
| <b>Height of drawbar</b>                | 21½ inches           | 22½ inches        |
| <b>Static weight with operator—Rear</b> | 11770 lb             | 9835 lb           |
|   | —Front               | 3490 lb           |
|   | —Total               | 15260 lb          |
|   |                      | 13315 lb          |

### Department of Agricultural Engineering

Dates of Test: April 20 to May 17, 1973

Manufacturer: INTERNATIONAL HARVESTER COMPANY, Chicago, Illinois

**FUEL, OIL AND TIME:** Fuel No 2 Diesel Cetane No. 50.1 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60° 0.8386 Weight per gallon 6.982 lb Oil SAE 30 API service classification SC/SE-CA/CD To motor 4.142 gal Drained from motor 3.764 gal Transmission and final drive lubricant IH Hy-Tran fluid Total time engine was operated 54.5 hours**

**ENGINE:** Make International Diesel Type 6 cylinder vertical with turbo-charger Serial No 414TT2U030194\* **Crankshaft mounted lengthwise Rated rpm 2600 Bore and stroke 4.30" × 4.75" Compression ratio 16 to 1 Displacement 414 cu in Cranking system 12 volt electric Lubrication pressure Air cleaner two paper elements Oil filter two full flow pleated paper screw-on cartridges Oil cooler engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil Fuel filter two paper cartridges Muffler was used Cooling medium temperature control thermostat**

**CHASSIS:** Type standard with duals Serial No. 2610154U025036\* **Tread width rear 66" to 124" front 62" to 86" Wheel base 104.8" 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 27.7" Vertical distance above roadway 41.4" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio with partial (2) range operator controlled power shifting Advertised speeds mph first 1½ second 2 third 2¼ fourth 2¾ fifth 3¼ sixth 4¾ seventh 5 eighth 5½ ninth 6¼ tenth 7¼ eleventh 7½ twelfth 9½ thirteenth 13 fourteenth 16½ fifteenth 17¼ sixteenth 22¼ reverse 2¾, 3½, 3¾, 4¾, 6¼, 8¼, 8½, 11 Clutch single plate dry disc operated by foot pedal with hydraulic power assist Brakes dry double disc hydraulically power actuated by two foot pedals that can be locked together with automatic equalizing Steering hydrostatic Turning radius (on concrete surface with brake applied) right 144" left 144" (on concrete surface without brake) right 165" left 165" Turning space diameter (on concrete surface with brake applied) right 295" left 295" (on concrete surface without brake) right 338" left 338" Power take-off 1000 rpm at 2270 engine rpm or 540 rpm at 2306 engine rpm.**

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

**REMARKS:** All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure. Six gears were chosen between 15% slip and 15 mph.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1124.

L. F. LARSEN

Engineer-In-Charge

G. W. STEINBRUEGGE, Chairman

W. E. SPLINTER

D. E. LANE

Board of Tractor Test Engineers