OECD APPROVAL # 1397
(Restricted code)
Date of approval: 18 Sept. 1992

NEBRASKA TRACTOR TESTING LABORATORY
DEPARTMENT OF AGRICULTURAL ENGINEERING
INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA - EAST CAMPUS
LINCOLN, NEBRASKA 68583-0832, USA

# REPORT ON TEST IN ACCORDANCE WITH OECD RESTRICTED CODE (CODE II)

## FOR THE OFFICIAL TESTING OF AGRICULTURAL TRACTORS

## FORD 7740-16x4 MFWD (4WD)
## WITH MECHANICAL FRONT WHEEL DRIVE




MANUFACTURED BY: Ford New Holland Inc
500 Diller Avenue
New Holland, PA. USA

NEBRASKA TEST NO. 1658

Test date: May 1992

This test report provides the results of the tests conducted in accordance with the OECD Standard Test Code for the Official Testing of Agricultural Tractor Performance - C(87)53 Final - Annex II, Restricted Code.

This report has been approved by the OECD Coordinating Centre in Paris (CEMAGREF) on 18 Sept. 1992

Ford 7740 - 16x4 with MFWD OECD # 1397

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Associate Director

Dr. Louis I. Leviticus

Senior Test Engineer

David L. Morgan

Test Engineer

Brent T. Sampson

Chairman, Tractor Test Board

Dr. Leonard L. Bashford

Members, Tractor Test Board

Dr. Robert D. Grisso

Dr. Kenneth von Bargen

Date: OCT 23 1992

LINCOLN, NEBRASKA 68583-0832,USA

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## SPECIFICATIONS OF TRACTOR.

| | |
|---|---|
| Manufacturers name/address | : Ford New Holland Inc.<br>Basildon, Essex, England |
| Submitted for test by | : The manufacturer |
| Selected for test by | : The manufacturer in agreement with the test station. |
| Place of running in | : Ford New Holland<br>New Holland PA |
| Duration of running in | : 202 hours |
| Location of Test | : Tractor Testing Laboratory<br>Lincoln, Nebraska,USA. |

### TRACTOR SPECIFICATIONS.

| | |
|---|---|
| Make | Ford New Holland |
| Model | 7740 "S" series (FA515M) 16x4 MFWD (4WD) |
| Type | Unit construction, mechanical front wheel drive (MFWD) |
| Number of driving wheels | 4 |
| Serial Number | *BD03042* |
| 1st Serial number | *BD00901* |

### ENGINE.

| | |
|---|---|
| Make | Ford New Holland (Genesis$^{tm}$) |
| Model | PA 304 CID NA |
| Type | Diesel, 4-stroke, direct injection, turbocharged |
| Serial Number | *PA334787* |
| **Cylinders** | |
| Number/Disposition | 4, in-line, vertical |
| Bore/stroke | 111.8 mm x 127.0 mm (4.4 in x 5.0 in) |
| Capacity | 5000 ml (304 in$^3$) |
| Compression Ratio | 17.5 - 1 |
| Arrangement of valves | Overhead |
| Cylinder liners | None |
| **Super charging** | |
| Make/Model/Type | Garrett/T25/Turbocharger; exhaust gas driven |
| Pressure | 86 kPa (12.5 psi) at rated speed and load |
| **Fuel System** | |
| Feed system | Gravity |
| Make/Type/Model of filters | Plastic strainer in tank; CAV Paper element+sediment bowl+ water trap between tank & |

| | |
|---|---|
| | injection pump |
| Fuel tank capacity | 103.4 liters (27.32 US gallons) |
| Make/Model/Type Injection Pump | Lucas DPS 60L850/2/2375 |
| Pump Serial number | 29612 LJG |
| Production setting of pump Flow Rate (Rated Eng.Spd & Full Load) | 160 - 173 Kg/hr<br>35.3 - 38.1 lb/hr |
| Make/Model/Type Injectors | CAV/multi-hole/JB6801134 |
| Injection pressure | 230 MPa (3335 psi) |
| Timing | 10 degrees before TDC |
| **Governor** | |
| Make/Model/Type | Lucas/mechanical |
| Governed engine speed range | From 750 to 2275 rev/min |
| Rated engine speed | 2100 rev/min |
| High-idle speed range | 2195-2275 rev/min |
| **Air Cleaner.** | |
| Air intake location | Under hood; in front and above radiator |
| Main Cleaner Make/Model/Type | Locker Air Maze/paper main and secondary element, exhaust aspirated |
| Maintenance indicator | Air restriction warning light |
| **Lubrication system.** | |
| Type of feed pump | Eccentric rotor pump |
| Type of filters | Metal mesh strainer in sump and full flow spin-on |
| Number | one spin-on |
| Oil cooler | Heat exchanger with engine coolant |
| **Cooling system.** | |
| Type of coolant | Liquid |
| Type of pump | Centrifugal, belt driven |
| Fan specification | Belt driven, viscous drive |
| Number of fan blades | 4 |
| Fan diameter | 480 mm (18.9 in) |
| Coolant system capacity | 13 l (13.7 qt) |
| Type of temperature control | Thermostat and viscous fan |
| Superpressure system | 90 kPa (13 psi) |
| **Starting system.** | |
| Make/Model/Type starter | Bosch/JF/Electrical |
| Power Rating | 3.1 kW (4.16 hp) |
| Cold starting aid | CAV Thermostart |
| Safety device | Transmission neutral and PTO off switches |

| | |
|---|---|
| **Electrical system.** | |
| Voltage & grounding. | 12 Volt DC;negative ground |
| Generator | |
| Make/Model/Type | Magneti Marelli/A127L/belt driven |
| Power rating | 55 Amp at 2130 engine rev/min. |
| Batteries | |
| Number & connection | One-12 V Lucas lead acid |
| Rating | 107 Amp-hour at 20 hour rating<br>800 cold crank amps |
| **Exhaust system.** | |
| Make/Model/Type | Nelson Burgess/dual chamber |
| Location | Silencer underhood; stack vertical above hood |
| **TRANSMISSION.** | |
| **Clutch. (travel)** | |
| Make/Model/Type | AP/Single dry plate |
| Number of plates | 1 |
| Plate diameter | 330 mm (13 in) |
| Method of operation | Mechanical/pedal operated |
| **Gear Box.** | |
| Make/Model/Type | Ford New Holland-16x4-Dual power |
| Arrangement | Main: 4 forward-1 reverse;<br>2-range lever controlled;<br>2-range electrical controlled |
| Number of gears | 16 forward and 4 reverse controlled by two hand levers and one panel switch |
| Oil cooler | Heat exchanger with air |
| Available options | None |
| **Rear axle and final drives.** | |
| Make/Model/Type | Ford New Holland/crown wheel and pinion, differential and inboard planetary reduction |
| Differential Lock | |
| Type | Mechanical; jaw clutch |
| Method of engagement | Pedal operated |
| Method of disengagement | Self-disengaging; spring return |
| **Front Axle and final drives.** | |
| Make/Model/Type | Carraro/709-S/limited slip differential |

Gear ratios and travel speeds.
(Tire dynamic radius of 820 mm (32.3 in) ISO 4251/1-1984)

| Gear Number | Number of engine revolutions for one revolution of the driving wheels | Nominal travel speed at rated engine speed of 2100 rev/min [km/h] | [mph] |
|---|---|---|---|
| Forward | | | |
| 1L | 279.25 | 2.32 | 1.44 |
| 2L | 223.75 | 2.91 | 1.81 |
| 1H | 217.19 | 2.99 | 1.86 |
| 2H | 174.03 | 3.73 | 2.33 |
| 3L | 127.48 | 5.10 | 3.17 |
| 3H | 99.15 | 6.55 | 4.07 |
| 4L | 93.66 | 6.93 | 4.30 |
| 5L | 78.16 | 8.31 | 5.16 |
| 4H | 72.85 | 8.92 | 5.54 |
| 6L | 62.62 | 10.37 | 6.44 |
| 5H | 60.79 | 10.68 | 6.64 |
| 6H | 48.71 | 13.33 | 8.29 |
| 7L | 35.68 | 18.19 | 11.30 |
| 7H | 27.75 | 23.39 | 14.53 |
| 8L | 26.21 | 24.77 | 15.39 |
| 8H | 20.39 | 31.84 | 19.79 |
| Reverse | | | |
| 1L | 194.26 | 3.35 | 2.08 |
| 1H | 151.09 | 4.29 | 2.66 |
| 2L | 54.37 | 11.94 | 7.42 |
| 2H | 42.29 | 15.35 | 9.54 |

Number of front wheel revolutions
for one rear wheel revolution. 1.332

## POWER - TAKE - OFF.

| | |
|---|---|
| **Main Power-Take-Off.** | |
| Type | Independent |
| Method of engagement | Hydraulically actuated multi-plate wet clutch operated by hand lever. |
| Number of shafts | One for each speed |
| Method of changing speeds | Reversing shaft |
| **Standard PTO. 540 rev/min.** | |
| Location | Rear of tractor, vertical center plane. |
| Diameter of shaft | 35 mm (1.375 in) |
| Number of splines | 6; conforms to ISO 500/1979. |
| Height above ground | 737 mm (29.0 in) |
| Distance from median plane of tractor | 0 mm |
| Distance behind rear axle | 458 mm (18.0 in) |
| PTO Speed at rated engine spd | 600 rev/min |
| Engine speed at Std. PTO spd | 1890 rev/min |
| Engine speed/PTO speed ratio | 3.50:1 |
| Power restriction | 48 kW (65 hp) |
| Direction of rotation when viewed from shaft end | Clockwise. |
| **Standard PTO. 1000 rev/min.** | |
| Location | Rear of tractor, vertical center plane. |
| Diameter of shaft | 35 mm (1.375 in) |
| Number of splines | 21; conforms to ISO 500/1979. |
| Height above ground | 737 mm (29.0 in) |
| Distance from median plane of tractor | 0 mm |
| Distance behind rear axle | 458 mm (18.0 in) |
| PTO Speed at rated engine spd | 1025 rev/min |
| Engine speed at Std. PTO Spd | 2049 rev/min |
| Engine speed/PTO speed ratio | 2.049:1 |
| Direction of rotation when viewed from shaft end | Clockwise. |

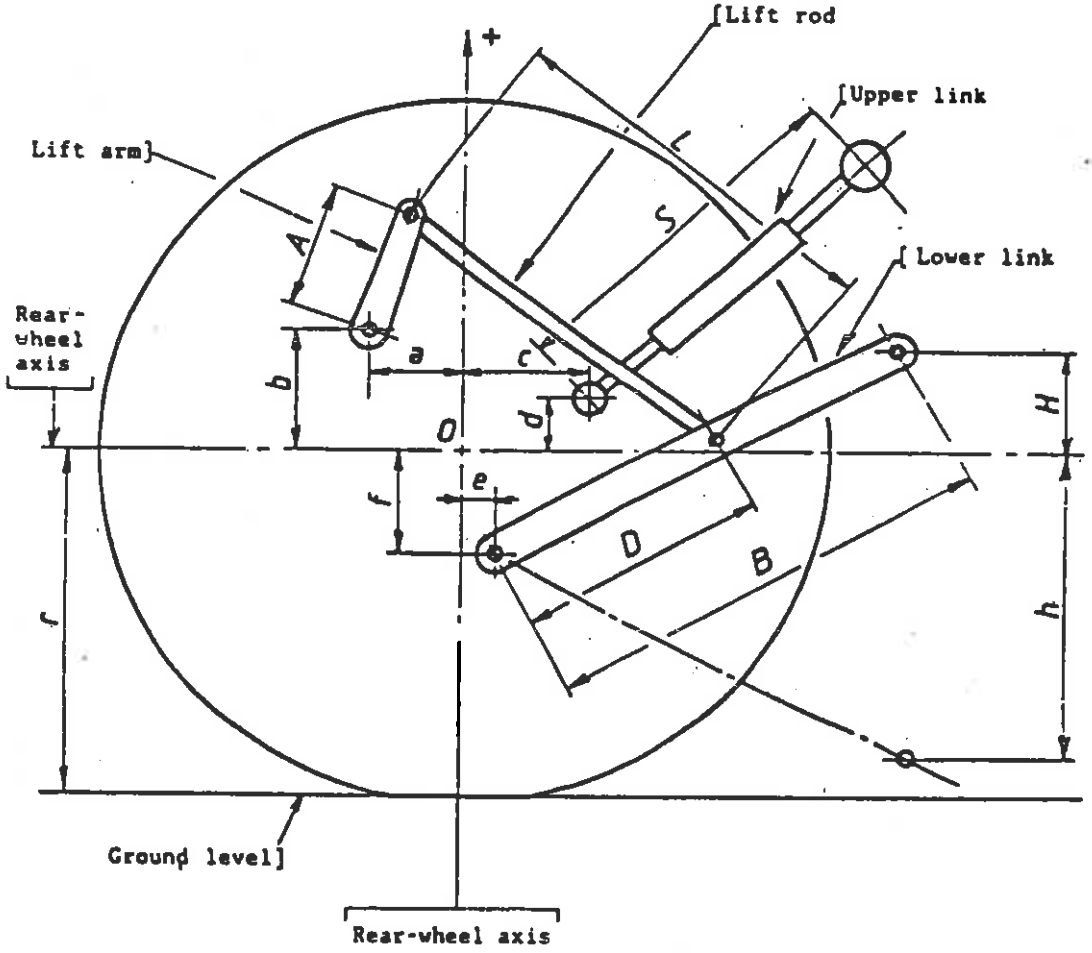
## POWER LIFT.

| | |
|---|---|
| Make | Sauer Sunstrand |
| Type of hydraulic system | Closed Center;load sensing |
| Number/Type of cylinders | One internal; single acting |
| Type of linkage lock for transport | None |
| Relief valve setting | 17.5-18.2 MPa (2550-2650 psi) |
| Opening pressure of cylinder safety valve | 19.7 MPa (2850 psi) |
| Lift pump type | Gear |
| Power transmission to pump | PTO shaft driven; 2nd pump driven from engine |
| Type/Number of filters | Full flow/Two replaceable paper cartridges |
| Location of oil reservoir | Transmission and rear axle housing |
| Number/Type/Location of tapping points. | 2 pairs of ISO standard couplings at rear of tractor. |
| Max. oil volume available for external cylinders. | 18.2 liters (19.2 US qt) |

## THREE POINT LINKAGE.

- Category 2 in conformity with ISO 730/1-1977
- Category adaptor - None

## THREE POINT LINKAGE



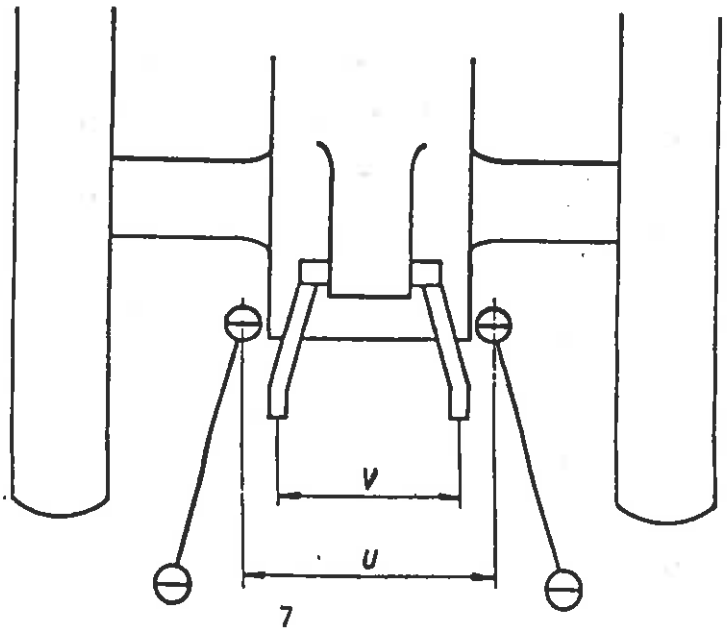



Table 1.1 -*Linkage geometry dimensions.

| | | Dimension or range | | Settings used on test | |
|---|---|---|---|---|---|
| | | [mm] | [in] | [mm] | [in] |
| Lift category | | II | | | |
| Rear Tire - Radius Index | (r) | 820 | 32.3 | | |
| Front Tire - Radius Index | (r') | 640 | 25.2 | | |
| Length of lift arms | (A) | 254 | 10.0 | same | |
| Length of lower links | (B) | 915 | 36.0 | same | |
| Distance of lift arm pivot from: horizontal | (a) | 102 | 4.0 | same | |
| rear wheel axis: vertical | (b) | 341 | 13.4 | same | |
| Horizontal distance between the 2 lower link points | (U) | 527 | 20.7 | same | |
| Horizontal distance between the 2 lift arm end points | (V) | 610 | 24.0 | same | |
| Length of upper link | (S) | 610 | 24.0 | | |
| | to | 830 | 32.7 | 714 | 28.1 |
| Distance of upper link pivot from: horizontal | (c) | 325 | 12.8 | same | |
| rear wheel axis: vertical | (d) Hi | 205 | 8.1 | | |
| | Lo | 149 | 5.9 | 205 | 8.1 |
| Distance of lower link pivot from: horizontal | (e) | 102 | 4.0 | same | |
| rear wheel axis: vertical | (f) | 229 | 9.0 | same | |
| Distance of lower link pivot points to lift rod pivot pts on lower links. | (D) | 412 | 16.2 | | |
| | | 466 | 18.3 | | |
| | | 520 | 20.5 | 520 | 20.5 |
| Length of lift rods | (L) | 743 | 29.3 | | |
| | to | 879 | 34.6 | 857 | 33.8 |
| Height of lower hitch points relative to rear wheel axis In low position | (h) | 264 | 10.4 | | |
| | to | 594 | 23.4 | 566 | 22.3 |
| In high position | (H) | 4 | 0.2 | | |
| | to | 236 | 9.3 | 50 | 2.0 |
| Height above ground of lower hitch points when locked in transport position. | | 824 | 32.5 | | |
| | to | 1056 | 41.6 | 869 | 34.2 |

*Assuming (r) with a tire dynamic index of 820 mm (32.3 in)
ISO 4251/1-1984

## SWINGING DRAWBAR.

| | |
|---|---|
| Type | Oscillating |
| Height above ground | 515 mm (20.3) |
| Adjustments | Longitudinal and lateral |
| Distance of hitch point from rear wheel axis,horizontal | 714-865 mm (28.1-34.1 in) |
| Distance of hitch point from PTO shaft end | |
| Vertical- | 228 mm (9.0 in) |
| Horizontal- Position 1 | 242 mm (9.6 in) |
| Position 2 | 357 mm (14.0 in) |
| Position 3 | 406 mm (16.0 in) |
| Lateral adjustment; Right side | 274 mm (10.8 in) |
| Left hand | 274 mm (10.8 in) |
| Distance of pivot point from rear wheel axis; horizontal | 13 mm (0.5 in) forward. |
| Diameter of drawbar pin hole | 27 mm (1.1 in) |
| Maximum vertical static permissible load | Position 1-16.02 kN (3600 lb)<br>Position 2-10.45 kN (2348 lb)<br>Position 3- 8.90 kN (2000 lb) |

## STEERING.

| | |
|---|---|
| Make/Model/Type | Ford New Holland/Hydrostatic |
| Method of operation | Steering wheel |
| Pump | Fixed displacement gear pump |
| Ram(s) | 1 Double acting cylinder |
| Working pressure | 16.7-17.8 MPa (2465-2580 psi) |

## BRAKES.

Service brake.

| | |
|---|---|
| Make/Model/Type | Girling/Wet multiplate |
| Method of operation | Mechanical; operated by two pedals which can be locked together. |

Parking brake.

| | |
|---|---|
| Type | Mechanical linkage coupled to service brake |
| Method of operation | Hand lever with ratchet |

| | |
|---|---|
| Trailer Brake | None |
| Type | NA |

## WHEELS.

| | |
|---|---|
| Number. | |
| Front | Two; Driving and steering |
| Rear | Two; Driving |
| Wheel base | 2362 mm (93 in) |

Track width adjustment

| | Minimum [mm] | Minimum [in] | Maximum [mm] | Maximum [in] | Adjustment method |
|---|---|---|---|---|---|
| Front | 1389 | 54.7 | 2132 | 83.9 | Reversing wheels and offset lug rims |
| Rear | 1524 | 60.0 | 2286 | 90.0 | Power adjust rims |

## PROTECTIVE STRUCTURE.

| | |
|---|---|
| Make/Model/Type | Ford New Holland/56-66-7740/ 2-post frame |
| Manufacturer's name/address | Hans Sauerman<br>Hohenwarter strasse 29<br>8899 Frienhausen, NR<br>Munich, Germany |
| Protective device | 2-post ROPS, non-tiltable |
| OECD approval number | CSD 1331/1 |

## DRIVER'S SEAT.

| | |
|---|---|
| Make/Model/Type | Grammer/DS44/1 HBA |
| Type of suspension | Mechanical |
| Range of adjustment | |
| Longitudinal | 150 mm (5.9 in) |
| Vertical | 100 mm (3.9 in) |

## LIGHTING.

| | Height above ground of center [mm] | Height above ground of center [in] | Size [mm] | Distance from out - side edge to median plane of tractor. [mm] | Distance from out - side edge to median plane of tractor. [in] |
|---|---|---|---|---|---|
| Head lights | 1219 | 48.0 | 112 x 172 | 226 | 8.9 |
| Rear lights | 1753 | 69.0 | 83 x 127 | 838 | 33.0 |
| Rear reflectors | 1676 | 66.0 | 45 x 127 | 838 | 33.0 |
| Rear work light | 1918 | 75,5 | 83 x 140 | 724 | 28.5 |

**TEST CONDITIONS.**

Overall dimensions.

| | | |
|---|---|---|
| Length | | 4115 mm (162.0 inch) |
| Width | Minimum | 2190 mm ( 86.3 inch) |
| Height | - Top of ROPS | 2651 mm (104.4 inch) |
| | - Top of exhaust | 2905 mm (114.4 inch) |
| Ground clearance. (unballasted) | | 472 mm ( 18.6 inch) |
| Clearance-limiting part | | Swinging drawbar support |

Tractor Mass (with cab,full fuel tank).

| | | without driver [kg] | without driver [lb] | with driver [kg] | with driver [lb] |
|---|---|---|---|---|---|
| Unballasted | Front | 1508 | 3325 | 1518 | 3346 |
| | Rear | 2430 | 5357 | 2495 | 5500 |
| | Total | 3938 | 8682 | 4013 | 8846 |
| Ballasted | Front | 1506 | 3320 | 1516 | 3342 |
| | Rear | 3617 | 7974 | 3682 | 8118 |
| | Total | 5123 | 11294 | 5198 | 11460 |

Ballast.

| | Number of weights | Mass (total) [kg] | Mass (total) [lb] | Water [kg] | Water [lb] |
|---|---|---|---|---|---|
| Front | none | -- | -- | -- | -- |
| Rear | 6 | 272 | 600 | 914 | 2014 |

Tire Specifications.

| | Front Wheels | Rear Wheels |
|---|---|---|
| Make | Goodyear | Goodyear |
| Dimensions | 14.9-28 | 18.4R38 |
| Ply rating | 8 ply | 1 star (6/8 ply) |
| Type | Bias | Radial |
| Max.load (tire manufacturer) | 1880 kg/tire (4140 lb/tire) | 2760 kg/tire (6080 lb/tire) |
| Max.load(tractor manufacturer) | 1746 kg/tire) (3848 lb/tire) | 2760 kg/tire (6080 lb/tire) |
| Inflation pressure(tire mfr) | 180 kPa (26 psi) | 124 kPa (18 psi) |
| Dynamic Radius Index | 640 mm (25.2 in) | 820 mm (32.3 in) |
| Chosen track width | 1709 mm (67.3 in) | 1638 mm (64.5 in) |

Oils and Lubrication.

Capacity and change interval:

| | Capacity liter | Capacity quart | Oil change hours | Filter change hours |
|---|---|---|---|---|
| Engine (w/o filter) | 11.4 | 12.1 | 300 | 300 |
| Gear Box (includes rear axle, rear final drive & hydraulics) | 66.0 | 69.6 | 1200 | 300 |
| Front axle housing | 6.2 | 6.6 | 1200 | --- |
| Final drive, front | 3.0 | 3.2 | 1200 | --- |
| Hydraulic system | common with gear box | | | |

Oil and Lubricant specifications:

| | Recommended | Used during test |
|---|---|---|
| Engine oil | | Same |
| Type | Ford ESN M2C121-B | |
| Viscosity | SAE 15W-40 | |
| Classification | API CD or Mil-L-2104C | |
| Transmission | | Same |
| Type | Ford ESN M2C134D | |
| Viscosity | 9.0CST at 100° C | |
| Classification | Mil-L-2105 | |
| Hydraulic fluid | same as transmission oil | |
| Steering oil | same as transmission oil | |
| Front axle and hubs | | Same |
| Type | Ford ESN M2C134-D | |
| Viscosity | 9.0 CST at 100° C | |
| Classification | Mil-L-2105 | |
| Grease | Ford M1C137-B | Same |
| Number of lubrication points | 13 | Same |

Fuel

| | |
|---|---|
| Type/grade | Premier; Grade 2-D, in conformity with national standard |
| Density (Pto test) | 0.8381 g/cubic-cm (6.978 lb/gallon) at 15°C (59°F) |
| (Drawbar test) | same as Pto test. |
| Cetane number | 53.9 |
| Viscosity | 2.31 cSt at 38°C (100°F) |

Remarks: This tractor is equipped with a variable speed cooling fan. Since engine power is influenced by fan speed, all PTO power tests were conducted at approximately the same ambient air temperatures.

## COMPULSORY TESTS.

### (1) MAIN POWER TAKE-OFF PERFORMANCE (1000 rev/min).

Date of tests : 6 May 1992
Location of tests : Tractor Testing Laboratory
University of Nebraska, Lincoln, Nebraska.
Type of Dynamometer: Eaton Dynamatic 2025 D.G.

| Power kW (hp) | Speeds engine rev/min | Speeds PTO rev/min | Fuel Consumption hourly l/h (gal/h) | Fuel Consumption hourly kg/h (lb/h) | Fuel Consumption specific kg/kW.h (lb/hp.h) | Specific energy kW.h/l (hp.h/gal) |
|---|---|---|---|---|---|---|
| 1.1 Maximum Power- 2 hour test. | | | | | | |
| 65.06 (87.24) | 2050 | 1000 | 19.41 (5.13) | 16.23 (35.78) | 0.249 (0.410) | 3.35 (17.01) |
| 1.2 Power at rated engine speed. (1 hour) | | | | | | |
| 64.77 (86.86) | 2100 | 1024 | 19.73 (5.21) | 16.50 (36.37) | 0.255 (0.419) | 3.28 (16.66) |
| 1.3 Maximum power at standard PTO speed. (1000 rev/min) | | | | | | |
| 65.06 (87.24) | 2050 | 1000 | 19.41 (5.13) | 16.23 (35.78) | 0.249 (0.410) | 3.35 (17.01) |

1.4 Part Loads - governor hand lever set for maximum power at rated engine speed

| Power kW (hp) | Speeds engine rev/min | Speeds PTO rev/min | Fuel Consumption hourly l/h (gal/h) | Fuel Consumption hourly kg/h (lb/h) | Fuel Consumption specific kg/kW.h (lb/hp.h) | Specific energy kW.h/l (hp.h/gal) |
|---|---|---|---|---|---|---|
| i. Torque corresponding to maximum power at rated engine speed. | | | | | | |
| 64.77 (86.86) | 2100 | 1024 | 19.73 (5.21) | 16.50 (36.37) | 0.255 (0.419) | 3.28 (16.66) |
| ii. 85% of the torque obtained in (i) | | | | | | |
| 57.94 (77.69) | 2209 | 1077 | 18.55 (4.90) | 15.51 (34.20) | 0.268 (0.440) | 3.12 (15.85) |
| iii. 75% of the torque defined in (ii) | | | | | | |
| 43.73 (58.64) | 2223 | 1084 | 15.62 (4.13) | 13.06 (28.80) | 0.299 (0.491) | 2.80 (14.21) |
| iv. 50% of the torque defined in (ii) | | | | | | |
| 29.31 (39.30) | 2235 | 1090 | 12.53 (3.31) | 10.48 (23.10) | 0.357 (0.588) | 2.34 (11.87) |
| v. 25% of the torque defined in (ii) | | | | | | |
| 14.74 (19.77) | 2247 | 1095 | 9.44 (2.49) | 7.89 (17.40) | 0.535 (0.880) | 1.56 (7.93) |
| vi. unloaded | | | | | | |
| 0.50 (0.67) | 2262 | 1103 | 6.35 (1.68) | 5.31 (11.70) | 10.591 (17.411) | 0.08 (0.40) |

1.5 Part Loads - governor hand lever set for maximum power at standard pto speed

| Power kW (hp) | Speeds engine rev/min | Speeds PTO rev/min | Fuel Consumption hourly l/h (gal/h) | Fuel Consumption hourly kg/h (lb/h) | Fuel Consumption specific kg/kW.h (lb/hp.h) | Specific energy kW.h/l (hp.h/gal) |
|---|---|---|---|---|---|---|
| i. Torque corresponding standard PTO rpm | | | | | | |
| 65.06 (87.24) | 2050 | 1000 | 19.41 (5.13) | 16.23 (35.78) | 0.249 (0.410) | 3.35 (17.01) |
| ii. 85% of the torque obtained in (i) | | | | | | |
| 57.91 (77.65) | 2144 | 1045 | 17.90 (4.73) | 14.97 (33.00) | 0.258 (0.425) | 3.23 (16.42) |
| iii. 75% of the torque defined in (ii) | | | | | | |
| 43.81 (58.75) | 2165 | 1056 | 15.30 (4.04) | 12.79 (28.20) | 0.292 (0.480) | 2.86 (14.54) |
| iv. 50% of the torque defined in (ii) | | | | | | |
| 29.39 (39.41) | 2179 | 1063 | 12.21 (3.22) | 10.21 (22.50) | 0.347 (0.571) | 2.41 (12.22) |
| v. 25% of the torque defined in (ii) | | | | | | |
| 14.85 (19.92) | 2194 | 1070 | 8.95 (2.36) | 7.48 (16.50) | 0.504 (0.828) | 1.66 (8.42) |
| vi. Unloaded | | | | | | |
| 0.52 (0.70) | 2212 | 1078 | 6.02 (1.59) | 5.03 (11.10) | 9.674 (15.904) | 0.09 (0.44) |

| | |
|---|---|
| No-load maximum engine speed | 2262 rev/min |
| Equivalent engine torque: | |
| at rated engine speed | 295 Nm (2100 rev/min) |
| at maximum power | 303 Nm (2050 rev/min) |
| at maximum torque | 376 Nm (1250 rev/min) |
| Mean atmospheric conditions: | |
| Temperature-dry bulb | 24'C (74'F) |
| Relative humidity | 26 % |
| Barometer | 98.97 kPa (29.23 in Hg) |

| | |
|---|---|
| Maximum Temperatures : | |
| Thermostat housing | 88'C (190'F) |
| Engine oil | 113'C (235'F) |
| Fuel at injection pump | 71'C (159'F) |
| Engine air intake | 26'C (78'F) |
| Trans./Hydr. Oil | 83'C (181'F) |
| Turbocharger boost pressure | |
| at rated engine speed | 86 kPa (12.5 psi) |
| at maximum power | 86 kPa (12.5 psi) |

## 2. HYDRAULIC POWER AND LIFTING FORCE.

Date of test: 7 May 1991
Location: TTL/UNL, Lincoln, Nebr.

### 2.1 HYDRAULIC POWER TEST - HYDRAULIC PUMP PERFORMANCE

| | |
|---|---|
| Sustained pressure with pump stalled | 18.00 MPa (2610 psi) |
| Pump delivery rate at minimum pressure & rated engine speed | 68.5 l/m (18.1 gpm) |

| | Flow Rate l/min (gal/min) | Pressure MPa (psi) | Power kW (hp) |
|---|---|---|---|
| At 90% of relief valve setting | 58.7 (15.5) | 16.2 (2350) | 15.5 (20.8) |
| At maximum hydraulic power. | 59.1 (15.6) | 15.9 (2300) | 15.6 (20.9) |

Tapping point(s): Two hydraulic outlets combined
Hydraulic fluid temperature at flow meter: 63'C (146'F)

## 2.2 POWER LIFT TEST.

| | | Hitch Points | Frame |
|---|---|---|---|
| Lower hitch points above ground - down position. | [mm/in] | 253/10.0 | 187/7.4 |
| Vertical movement without load | [mm/in] | 616/24.3 | 772/30.4 |
| Vertical movement with load | [mm/in] | 577/22.7 | 757/29.8 |
| Maximum corrected force through full range | [kN/lbf] | 22.7/5112 | 17.3/3879 |
| Corresponding pressure | [kPa/psi] | 16599/2408 | |
| Moment about rear axle | [kN.m/ft.lb] | 43.9/32376 | 43.8/32327 |
| Maximum mast tilt angle | [degrees] | -- | 8.4 |

Lifting height relative to the horizontal position of lower links

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| [mm] | | -424 | -333 | -300 | -201 | -99 | 0 |
| [in] | | -16.7 | -13.1 | -11.8 | -7.9 | -3.9 | 0 |
| Corrected lift forces. | | | | | | | |
| hitch points | [kN] | -- | 25.7 | 22.7 | 23.7 | 24.7 | 24.7 |
| | [lb] | -- | 5778 | 5112 | 5337 | 5544 | 5553 |
| at frame | [kN] | 22.4 | 19.6 | -- | 20.0 | 20.1 | 19.8 |
| | [lb] | 5031 | 4403 | -- | 4491 | 4522 | 4455 |

Lifting height relative to the horizontal position of lower links

| | | | | | | |
|---|---|---|---|---|---|---|
| [mm] | | 99 | 198 | 244 | 312 | 333 |
| [in] | | 3.9 | 7.8 | 9.6 | 12.3 | 13.1 |
| Corrected lift forces. | | | | | | |
| hitch points | [kN] | 24.7 | 24.4 | 24.5 | -- | -- |
| | [lb] | 5553 | 5483 | 5508 | -- | -- |
| at frame | [kN] | 18.9 | -- | 17.9 | 17.4 | 17.3 |
| | [lb] | 4241 | -- | 4025 | 3916 | 3879 |

| Date of tests: 08-May-92 | | | | | | Fuel density: | 0.838 kg/l | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type of track: Concrete | | | | | | Test number: | 1658 | | | | | | | |
| **Gear** | **Power** | **Pull** | **Speed** | **Engine speed** | **Slip** | **SFC** | | **Temperature, deg C** | | | | | **Rel hum** | **Pressure** |
| | kW | kN | km/h | rev/min | | kg/kW.h | kW.h/l | Fuel | Coolant | Oil | Dry | Wet | | kPa |
| II. Part loads (unballasted, fwa) | | | | | | Tire pressure: | | 86 kPa, rear | | 97 kPa, front | | Drawbar height | 508 mm | |
| II.1 in selected gear at maximum power | | | | | | | | | | | | | | |
| 8 (5L) | 57.37 | 25.23 | 8.19 | 2104 | 4.28% | 0.289 | 2.89 | 67 | 87 | 108 | 25 | 16 | 39% | 97.60 |
| II.1.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 45.99 | 18.94 | 8.74 | 2219 | 3.07% | 0.316 | 2.65 | 61 | 86 | 106 | 25 | 17 | 44% | 97.56 |
| II.1.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 31.10 | 12.61 | 8.88 | 2238 | 2.33% | 0.376 | 2.22 | 61 | 85 | 105 | 25 | 17 | 44% | 97.56 |
| II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1 | | | | | | | | | | | | | | |
| 10 (6L) | 45.98 | 18.92 | 8.75 | 1780 | 3.16% | 0.271 | 3.09 | 62 | 84 | 104 | 25 | 17 | 44% | 97.56 |
| II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2 | | | | | | | | | | | | | | |
| 10 (6L) | 31.12 | 12.62 | 8.88 | 1789 | 2.17% | 0.304 | 2.75 | 61 | 84 | 101 | 25 | 17 | 44% | 97.56 |
| II.2 in selected gear nearest to 7.5 km/h | | | | | | | | | | | | | | |
| 8 (5L) | 57.37 | 25.23 | 8.19 | 2104 | 4.28% | 0.289 | 2.89 | 67 | 87 | 108 | 25 | 16 | 39% | 97.60 |
| II.2.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 45.99 | 18.94 | 8.74 | 2219 | 3.07% | 0.316 | 2.65 | 61 | 86 | 106 | 25 | 17 | 44% | 97.56 |
| II.2.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 31.10 | 12.61 | 8.88 | 2238 | 2.33% | 0.376 | 2.22 | 61 | 85 | 105 | 25 | 17 | 44% | 97.56 |
| II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1 | | | | | | | | | | | | | | |
| 10 (6L) | 45.98 | 18.92 | 8.75 | 1780 | 3.16% | 0.271 | 3.09 | 62 | 84 | 104 | 25 | 17 | 44% | 97.56 |
| II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2 | | | | | | | | | | | | | | |
| 10 (6L) | 31.12 | 12.62 | 8.88 | 1789 | 2.17% | 0.304 | 2.75 | 61 | 84 | 101 | 25 | 17 | 44% | 97.56 |

| Date of tests: 13-May-92 | | | | | | Fuel density: | 6.978 lb/gal | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type of track: Concrete | | | | | | Test number: | 1658 | | | | | | | |
| **Gear** | **Power** | **Pull** | **Speed** | **Engine speed** | **Slip** | **SFC** | | **Temperature, deg F** | | | | | **Rel hum** | **Pressure** |
| | hp | lb | mph | rev/min | | lb/hp.h | hp.h/gal | Fuel | Coolant | Oil | Dry | Wet | | in Hg |
| II. Part loads (unballasted, fwa) | | | | | | Tire pressure: | | 12 psig, rear | | 14 psig, front | | Drawbar height | 20 in | |
| II.1 in selected gear at maximum power | | | | | | | | | | | | | | |
| 8 (5L) | 76.93 | 5673 | 5.09 | 2104 | 4.28% | 0.475 | 14.69 | 153 | 188 | 226 | 77 | 61 | 39% | 28.82 |
| II.1.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 61.67 | 4258 | 5.43 | 2219 | 3.07% | 0.519 | 13.43 | 142 | 187 | 224 | 77 | 62 | 44% | 28.81 |
| II.1.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 41.71 | 2834 | 5.52 | 2238 | 2.33% | 0.618 | 11.29 | 143 | 185 | 221 | 77 | 62 | 44% | 28.81 |
| II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1 | | | | | | | | | | | | | | |
| 10 (6L) | 61.66 | 4255 | 5.43 | 1780 | 3.16% | 0.445 | 15.68 | 143 | 184 | 220 | 77 | 62 | 44% | 28.81 |
| II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2 | | | | | | | | | | | | | | |
| 10 (6L) | 41.73 | 2837 | 5.52 | 1789 | 2.17% | 0.500 | 13.94 | 141 | 183 | 215 | 77 | 62 | 44% | 28.81 |
| II.2 in selected gear nearest to 4.6 mph | | | | | | | | | | | | | | |
| 8 (5L) | 76.93 | 5673 | 5.09 | 2104 | 4.28% | 0.475 | 14.69 | 153 | 188 | 226 | 77 | 61 | 39% | 28.82 |
| II.2.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 61.67 | 4258 | 5.43 | 2219 | 3.07% | 0.519 | 13.43 | 142 | 187 | 224 | 77 | 62 | 44% | 28.81 |
| II.2.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 41.71 | 2834 | 5.52 | 2238 | 2.33% | 0.618 | 11.29 | 143 | 185 | 221 | 77 | 62 | 44% | 28.81 |
| II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1 | | | | | | | | | | | | | | |
| 10 (6L) | 61.66 | 4255 | 5.43 | 1780 | 3.16% | 0.445 | 15.68 | 143 | 184 | 220 | 77 | 62 | 44% | 28.81 |
| II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2 | | | | | | | | | | | | | | |
| 10 (6L) | 41.73 | 2837 | 5.52 | 1789 | 2.17% | 0.500 | 13.94 | 141 | 183 | 215 | 77 | 62 | 44% | 28.81 |

## OECD Drawbar Data (SI)

Date of tests: 11-May-92 Fuel density: 0.838 kg/l
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg C | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | kN | km/h | rev/min | | kg/kW.h | kW.h/l | Fuel | Coolant | Oil | Dry | Wet | | kPa |
| I. Maximum Power (unballasted, fwa at 2100 rev/min) | | | | | Tire pressure: | | 86 kPa, rear | | 97 kPa, front | | Drawbar height | | 508 mm | |
| 3 (1H) | 29.68 | 38.37 | 2.78 | 2229 | 14.58% | 0.412 | 2.03 | 66 | 84 | 106 | 23 | 22 | 92% | 97.32 |
| 4 (2H) | 37.46 | 39.13 | 3.45 | 2217 | 14.83% | 0.372 | 2.25 | 66 | 84 | 104 | 21 | 21 | 100% | 97.39 |
| 5 (3L) | 50.76 | 36.84 | 4.96 | 2197 | 9.40% | 0.321 | 2.61 | 67 | 85 | 107 | 22 | 21 | 92% | 97.36 |
| 6 (3H) | 54.84 | 30.98 | 6.37 | 2115 | 5.93% | 0.301 | 2.78 | 67 | 87 | 108 | 25 | 17 | 44% | 97.60 |
| 7 (4L) | 56.50 | 30.19 | 6.74 | 2098 | 5.31% | 0.292 | 2.87 | 68 | 87 | 108 | 25 | 17 | 44% | 97.60 |
| 8 (5L) | 57.37 | 25.23 | 8.18 | 2104 | 4.28% | 0.289 | 2.89 | 67 | 87 | 108 | 25 | 16 | 39% | 97.60 |
| 9 (4H) | 56.10 | 22.88 | 8.83 | 2103 | 3.72% | 0.290 | 2.88 | 66 | 86 | 106 | 25 | 17 | 44% | 97.60 |
| 10 (6L) | 57.30 | 19.99 | 10.32 | 2104 | 3.32% | 0.289 | 2.89 | 68 | 87 | 109 | 26 | 17 | 40% | 97.60 |
| 11 (5H) | 56.82 | 19.23 | 10.64 | 2103 | 3.16% | 0.286 | 2.92 | 64 | 86 | 106 | 26 | 17 | 40% | 97.60 |
| 12 (6H) | 56.30 | 15.19 | 13.34 | 2099 | 2.50% | 0.293 | 2.85 | 66 | 86 | 107 | 25 | 17 | 44% | 97.60 |

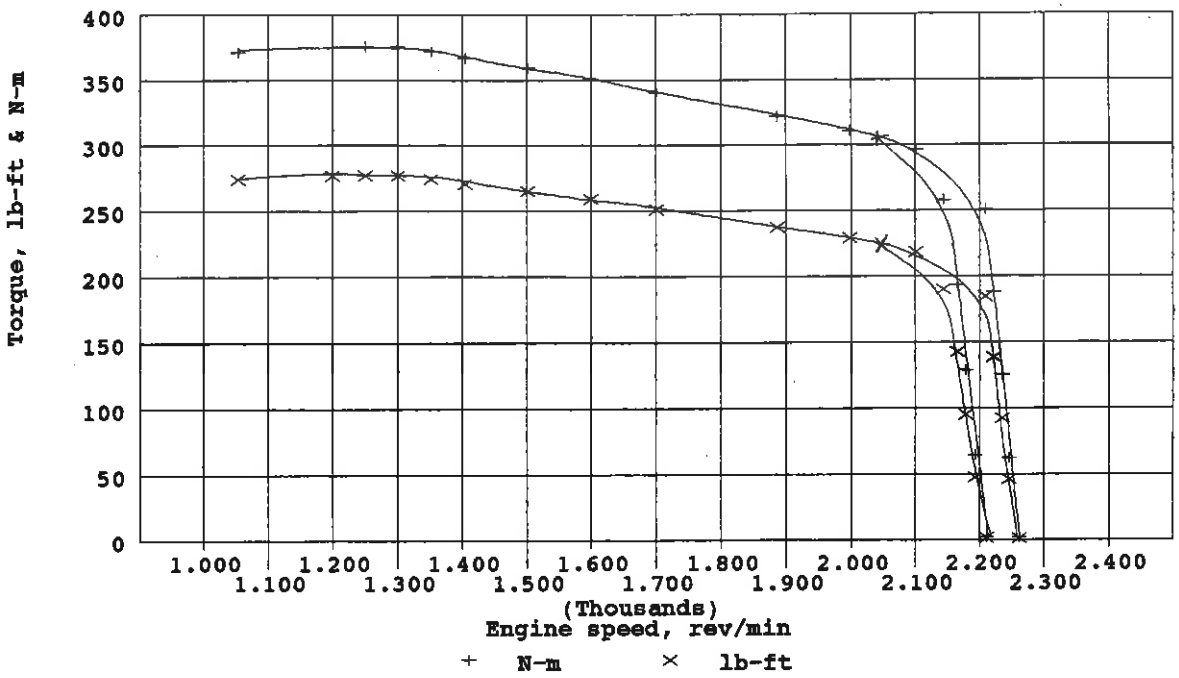
## OECD Drawbar Data (US)

Date of tests: 11-May-92 Fuel density: 6.978 lb/gal
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg F | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | hp | lb | mph | rev/min | | lb/hp.h | hp.h/gal | Fuel | Coolant | Oil | Dry | Wet | | in Hg |
| I. Maximum Power (unballasted, fwa at 2100 rev/min) | | | | | Tire pressure: | | 12 psig, rear | | 14 psig, front | | Drawbar height | | 20 in | |
| 3 (1H) | 39.80 | 8626 | 1.73 | 2229 | 14.58% | 0.677 | 10.30 | 151 | 183 | 223 | 74 | 72 | 92% | 28.74 |
| 4 (2H) | 50.24 | 8796 | 2.14 | 2217 | 14.83% | 0.612 | 11.40 | 151 | 184 | 219 | 70 | 69 | 100% | 28.76 |
| 5 (3L) | 68.07 | 8281 | 3.08 | 2197 | 9.40% | 0.527 | 13.24 | 153 | 185 | 224 | 72 | 70 | 92% | 28.75 |
| 6 (3H) | 73.54 | 6965 | 3.96 | 2115 | 5.93% | 0.495 | 14.10 | 152 | 189 | 227 | 77 | 62 | 44% | 28.82 |
| 7 (4L) | 75.76 | 6787 | 4.19 | 2098 | 5.31% | 0.479 | 14.56 | 154 | 188 | 227 | 77 | 62 | 44% | 28.82 |
| 8 (5L) | 76.93 | 5673 | 5.09 | 2104 | 4.28% | 0.475 | 14.69 | 153 | 188 | 226 | 77 | 61 | 39% | 28.82 |
| 9 (4H) | 75.24 | 5144 | 5.49 | 2103 | 3.72% | 0.477 | 14.63 | 150 | 188 | 223 | 77 | 62 | 44% | 28.82 |
| 10 (6L) | 76.84 | 4495 | 6.41 | 2104 | 3.32% | 0.475 | 14.70 | 154 | 189 | 228 | 78 | 62 | 40% | 28.82 |
| 11 (5H) | 76.20 | 4322 | 6.61 | 2103 | 3.16% | 0.471 | 14.82 | 147 | 187 | 224 | 78 | 62 | 40% | 28.82 |
| 12 (6H) | 75.50 | 3415 | 8.29 | 2099 | 2.50% | 0.482 | 14.46 | 151 | 187 | 224 | 77 | 62 | 44% | 28.82 |

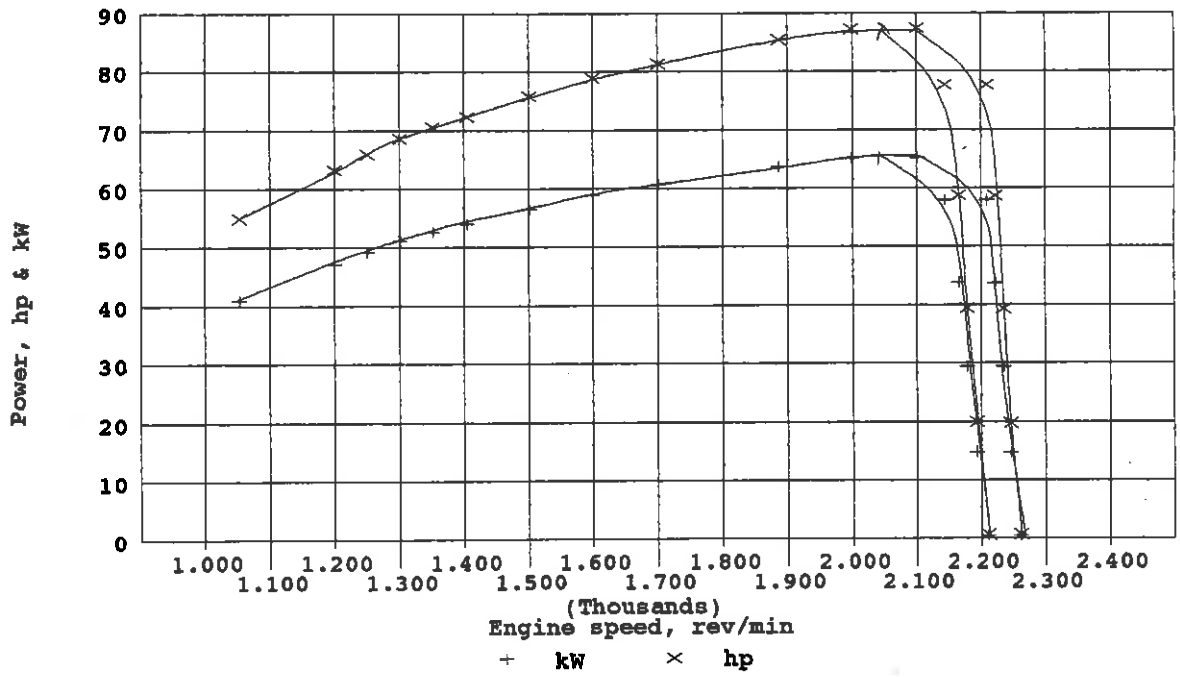
## Equivalent Crankshaft Torque

Ford 7740 MFWD



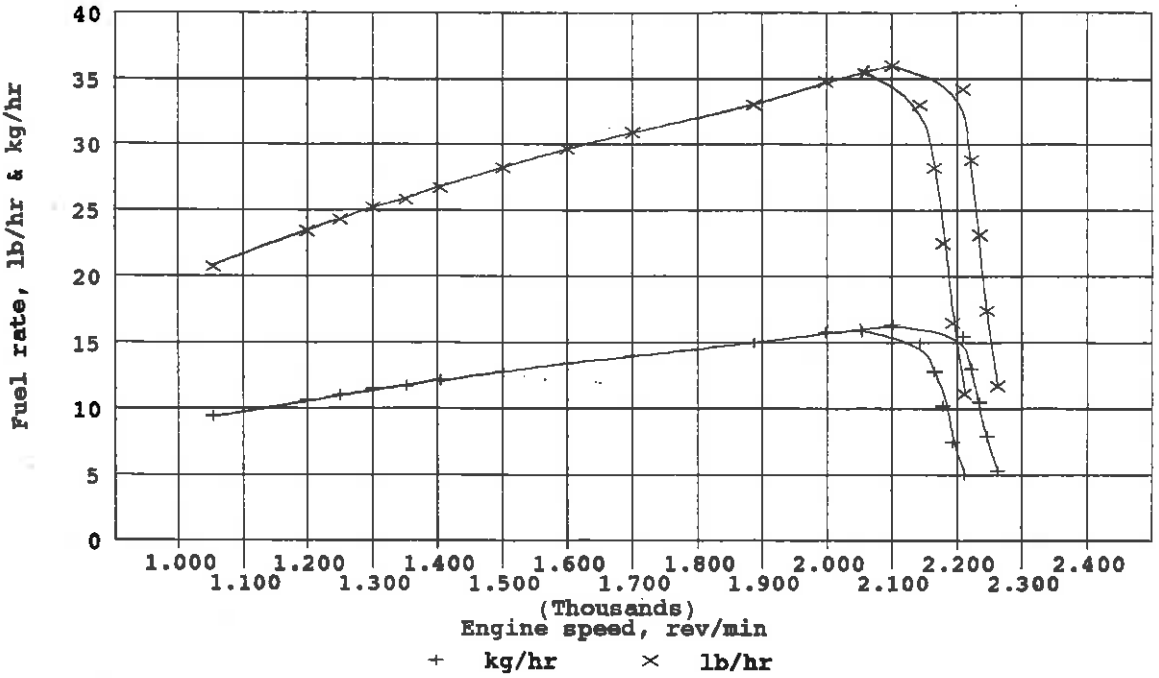

## PTO Power

Ford 7740 MFWD



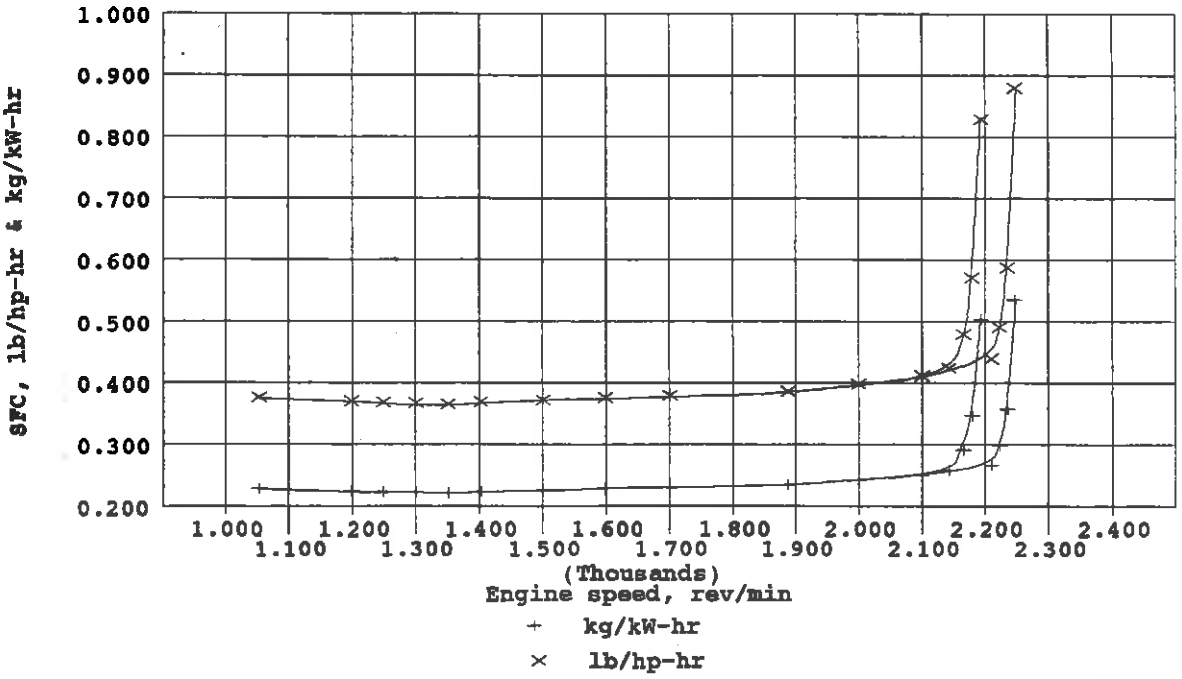
## PTO Fuel Consumption

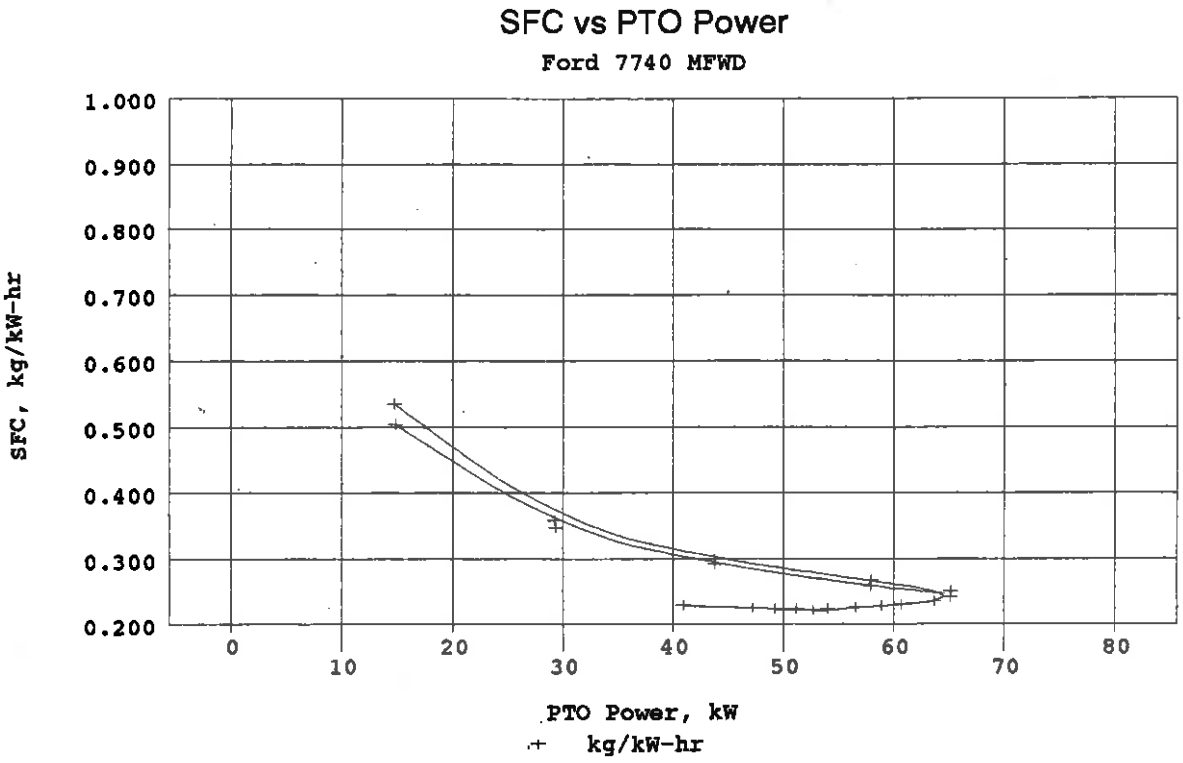
Ford 7740 MFWD

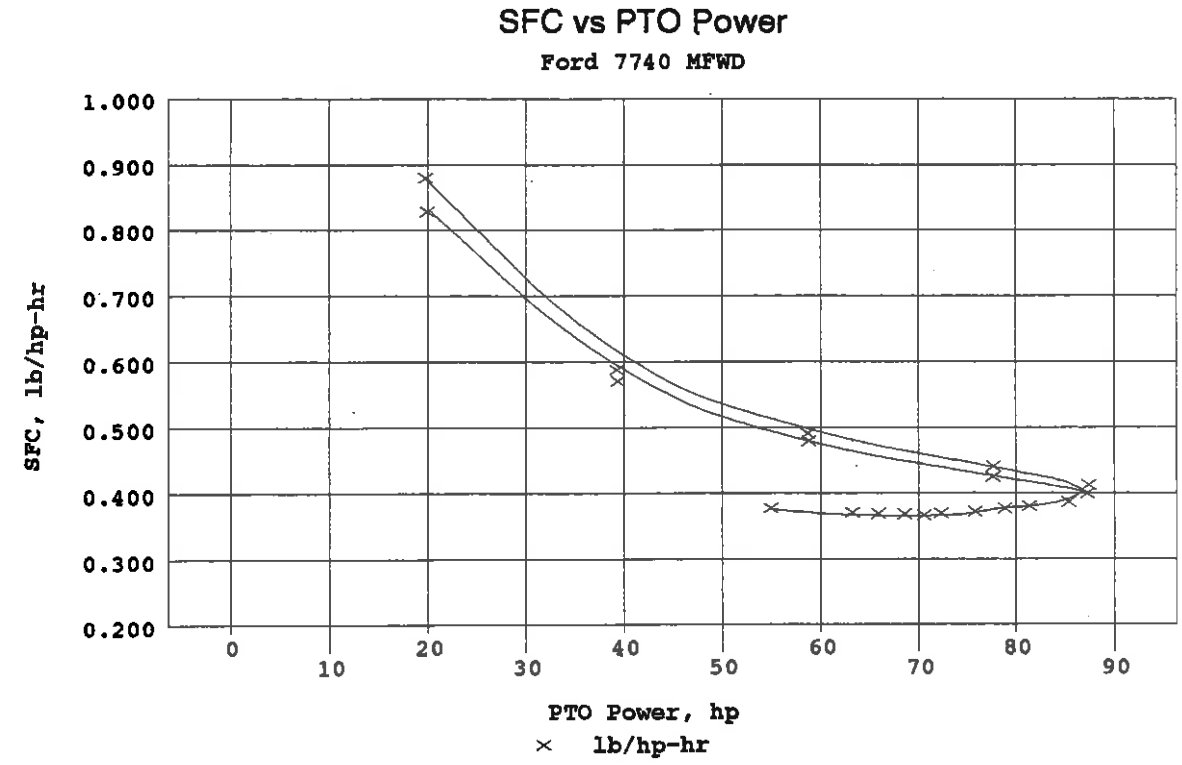



## PTO Specific Fuel Consumption

Ford 7740 MFWD




SFC vs PTO Power
Ford 7740 MFWD
SFC, kg/kW-hr
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
10
20
30
40
50
60
70
80
PTO Power, kW
kg/kW-hr


SFC vs PTO Power
Ford 7740 MFWD
SFC, lb/hp-hr
1.000
0.900
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0
10
20
30
40
50
60
70
80
90
PTO Power, hp
lb/hp-hr

# OPTIONAL TESTS - BALLASTED - FRONT DRIVE DISENGAGED

Date of tests: 08-May-92 Fuel density: 0.838 kg/l
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg C | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | kN | km/h | rev/min | | kg/kW.h | kW.h/l | Fuel | Coolant | Oil | Dry | Wet | | kPa |
| II. Part loads (ballasted, 2wd) | | | | | Tire pressure: | | 90 kPa, rear | | 97 kPa, front | | Drawbar height | | 483 mm | |
| II.1 in selected gear at maximum power | | | | | | | | | | | | | | |
| 8 (5L) | 58.19 | 25.72 | 8.14 | 2097 | 2.97% | 0.280 | 2.99 | 68 | 86 | 108 | 16 | 11 | 54% | 98.51 |
| II.1.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 45.91 | 19.28 | 8.57 | 2191 | 2.24% | 0.310 | 2.70 | 63 | 85 | 104 | 20 | 12 | 37% | 98.41 |
| II.1.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 31.42 | 12.86 | 8.79 | 2233 | 1.58% | 0.374 | 2.23 | 64 | 85 | 105 | 20 | 12 | 37% | 98.41 |
| II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1 | | | | | | | | | | | | | | |
| 10 (6L) | 45.91 | 19.29 | 8.57 | 1754 | 2.24% | 0.269 | 3.11 | 65 | 84 | 104 | 20 | 12 | 37% | 98.41 |
| II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2 | | | | | | | | | | | | | | |
| 10 (6L) | 31.42 | 12.86 | 8.80 | 1789 | 1.58% | 0.305 | 2.75 | 62 | 84 | 101 | 20 | 12 | 37% | 98.41 |
| II.2 in selected gear nearest to 7.5 km/h | | | | | | | | | | | | | | |
| 8 (5L) | 58.19 | 25.72 | 8.14 | 2097 | 2.97% | 0.280 | 2.99 | 68 | 86 | 108 | 16 | 11 | 54% | 98.51 |
| II.2.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 45.91 | 19.28 | 8.57 | 2191 | 2.24% | 0.310 | 2.70 | 63 | 85 | 104 | 20 | 12 | 37% | 98.41 |
| II.2.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 31.42 | 12.86 | 8.79 | 2233 | 1.58% | 0.374 | 2.23 | 64 | 85 | 105 | 20 | 12 | 37% | 98.41 |
| II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1 | | | | | | | | | | | | | | |
| 10 (6L) | 45.91 | 19.29 | 8.57 | 1754 | 2.24% | 0.269 | 3.11 | 65 | 84 | 104 | 20 | 12 | 37% | 98.41 |
| II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2 | | | | | | | | | | | | | | |
| 10 (6L) | 31.42 | 12.86 | 8.80 | 1789 | 1.58% | 0.305 | 2.75 | 62 | 84 | 101 | 20 | 12 | 37% | 98.41 |

Date of tests: 13-May-92 Fuel density: 6.978 lb/gal
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg F | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | hp | lb | mph | rev/min | | lb/hp.h | hp.h/gal | Fuel | Coolant | Oil | Dry | Wet | | in Hg |
| II. Part loads (ballasted, 2wd) | | | | | Tire pressure: | | 13 psig, rear | | 14 psig, front | | Drawbar height | | 19 in | |
| II.1 in selected gear at maximum power | | | | | | | | | | | | | | |
| 8 (5L) | 78.04 | 5782 | 5.06 | 2097 | 2.97% | 0.460 | 15.17 | 154 | 186 | 226 | 60 | 51 | 54% | 29.09 |
| II.1.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 61.57 | 4335 | 5.33 | 2191 | 2.24% | 0.509 | 13.70 | 145 | 185 | 220 | 68 | 54 | 37% | 29.06 |
| II.1.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 42.13 | 2892 | 5.46 | 2233 | 1.58% | 0.616 | 11.34 | 147 | 185 | 221 | 68 | 54 | 37% | 29.06 |
| II.1.3 next higher gear at reduced engine speed, same pull and travel speed as II.1.1 | | | | | | | | | | | | | | |
| 10 (6L) | 61.56 | 4337 | 5.32 | 1754 | 2.24% | 0.441 | 15.81 | 150 | 184 | 219 | 68 | 54 | 37% | 29.06 |
| II.1.4 next higher gear at reduced engine speed, same pull and travel speed as II.1.2 | | | | | | | | | | | | | | |
| 10 (6L) | 42.13 | 2891 | 5.47 | 1789 | 1.58% | 0.501 | 13.94 | 144 | 183 | 214 | 68 | 54 | 37% | 29.06 |
| II.2 in selected gear nearest to 4.6 mph | | | | | | | | | | | | | | |
| 8 (5L) | 78.04 | 5782 | 5.06 | 2097 | 2.97% | 0.460 | 15.17 | 154 | 186 | 226 | 60 | 51 | 54% | 29.09 |
| II.2.1 75% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 61.57 | 4335 | 5.33 | 2191 | 2.24% | 0.509 | 13.70 | 145 | 185 | 220 | 68 | 54 | 37% | 29.06 |
| II.2.2 50% of pull at maximum power at rated speed | | | | | | | | | | | | | | |
| 8 (5L) | 42.13 | 2892 | 5.46 | 2233 | 1.58% | 0.616 | 11.34 | 147 | 185 | 221 | 68 | 54 | 37% | 29.06 |
| II.2.3 next higher gear at reduced engine speed, same pull and travel speed as II.2.1 | | | | | | | | | | | | | | |
| 10 (6L) | 61.56 | 4337 | 5.32 | 1754 | 2.24% | 0.441 | 15.81 | 150 | 184 | 219 | 68 | 54 | 37% | 29.06 |
| II.2.4 next higher gear at reduced engine speed, same pull and travel speed as II.2.2 | | | | | | | | | | | | | | |
| 10 (6L) | 42.13 | 2891 | 5.47 | 1789 | 1.58% | 0.501 | 13.94 | 144 | 183 | 214 | 68 | 54 | 37% | 29.06 |

## OECD Drawbar Data (SI)

Date of tests: 13-May-92 Fuel density: 0.838 kg/l
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg C | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | kN | km/h | rev/min | | kg/kW.h | kW.h/l | Fuel | Coolant | Oil | Dry | Wet | | kPa |
| lb. Maximum Power (ballasted, 2wd at 2100 rev/min) | | | | | | Tire pressure: | | 90 kPa, rear | | 97 kPa, front | Drawbar height | | 483 mm | |
| 4 (2H) | 43.92 | 46.59 | 3.39 | 2206 | 14.40% | 0.348 | 2.41 | 68 | 84 | 107 | 12 | 8 | 58% | 98.58 |
| 5 (3L) | 55.62 | 41.56 | 4.82 | 2099 | 6.46% | 0.292 | 2.86 | 67 | 86 | 108 | 13 | 9 | 59% | 98.54 |
| 6 (3H) | 55.89 | 31.65 | 6.36 | 2095 | 3.84% | 0.291 | 2.87 | 68 | 86 | 108 | 14 | 10 | 60% | 98.54 |
| 7 (4L) | 57.48 | 30.67 | 6.75 | 2097 | 3.69% | 0.282 | 2.96 | 67 | 86 | 108 | 16 | 11 | 54% | 98.51 |
| 8 (5L) | 58.19 | 25.72 | 8.15 | 2097 | 2.97% | 0.280 | 2.99 | 68 | 86 | 108 | 16 | 11 | 54% | 98.51 |
| 9 (4H) | 56.57 | 23.18 | 8.78 | 2101 | 2.64% | 0.288 | 2.90 | 68 | 86 | 108 | 16 | 11 | 54% | 98.48 |
| 10 (6L) | 57.47 | 20.25 | 10.22 | 2096 | 2.40% | 0.283 | 2.96 | 68 | 86 | 108 | 17 | 11 | 47% | 98.48 |
| 11 (5H) | 56.83 | 19.35 | 10.57 | 2101 | 2.24% | 0.286 | 2.92 | 67 | 86 | 107 | 17 | 11 | 47% | 98.44 |
| 12 (6H) | 56.15 | 15.30 | 13.22 | 2094 | 1.74% | 0.289 | 2.89 | 66 | 86 | 107 | 17 | 11 | 47% | 98.44 |

## OECD Drawbar Data (US)

Date of tests: 08-May-92 Fuel density: 6.978 lb/gal
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg F | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | hp | lb | mph | rev/min | | lb/hp.h | hp.h/gal | Fuel | Coolant | Oil | Dry | Wet | | in Hg |
| lb. Maximum Power (ballasted, 2wd at 2100 rev/min) | | | | | | Tire pressure: | | 13 psig, rear | | 14 psig, front | Drawbar height | | 19 in | |
| 4 (2H) | 58.90 | 10474 | 2.11 | 2206 | 14.40% | 0.571 | 12.21 | 154 | 184 | 224 | 53 | 46 | 58% | 29.11 |
| 5 (3L) | 74.59 | 9343 | 2.99 | 2099 | 6.46% | 0.480 | 14.52 | 153 | 186 | 226 | 56 | 48 | 59% | 29.10 |
| 6 (3H) | 74.95 | 7116 | 3.95 | 2095 | 3.84% | 0.479 | 14.57 | 155 | 186 | 226 | 58 | 50 | 60% | 29.10 |
| 7 (4L) | 77.09 | 6896 | 4.19 | 2097 | 3.69% | 0.464 | 15.04 | 153 | 186 | 226 | 60 | 51 | 54% | 29.09 |
| 8 (5L) | 78.04 | 5782 | 5.06 | 2097 | 2.97% | 0.460 | 15.17 | 154 | 186 | 226 | 60 | 51 | 54% | 29.09 |
| 9 (4H) | 75.86 | 5212 | 5.46 | 2101 | 2.64% | 0.474 | 14.73 | 155 | 187 | 226 | 61 | 51 | 54% | 29.08 |
| 10 (6L) | 77.07 | 4552 | 6.35 | 2096 | 2.40% | 0.465 | 15.02 | 154 | 187 | 226 | 62 | 51 | 47% | 29.08 |
| 11 (5H) | 76.22 | 4351 | 6.57 | 2101 | 2.24% | 0.471 | 14.82 | 153 | 187 | 225 | 63 | 52 | 47% | 29.07 |
| 12 (6H) | 75.29 | 3439 | 8.21 | 2094 | 1.74% | 0.476 | 14.67 | 151 | 187 | 225 | 63 | 52 | 47% | 29.07 |

OPTIONAL TESTS - BALLASTED - FRONT DRIVE ENGAGED

## OECD Drawbar Data (SI)

Date of tests: 13-May-92 Fuel density: 0.838 kg/l
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg C | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kW | kN | km/h | rev/min | | kg/kW.h | kW.h/l | Fuel | Coolant | Oil | Dry | Wet | | kPa |
| Ia. Maximum Power (ballasted, fwa at 2100 rev/min) | | | | | Tire pressure: | | 90 kPa, rear | | 97 kPa, front | | Drawbar height | | 483 mm | |
| 4 (2H) | 49.48 | 50.49 | 3.53 | 2197 | 11.17% | 0.327 | 2.56 | 66 | 84 | 107 | 11 | 7 | 56% | 98.58 |
| 5 (3L) | 56.50 | 41.14 | 4.94 | 2109 | 5.01% | 0.289 | 2.89 | 65 | 86 | 107 | 13 | 8 | 50% | 98.58 |
| 6 (3H) | 55.96 | 31.44 | 6.41 | 2095 | 3.59% | 0.290 | 2.89 | 66 | 86 | 107 | 14 | 9 | 51% | 98.54 |
| 7 (4L) | 57.50 | 30.41 | 6.81 | 2099 | 3.43% | 0.282 | 2.97 | 66 | 86 | 107 | 15 | 10 | 53% | 98.51 |
| 8 (5L) | 57.98 | 25.42 | 8.21 | 2098 | 2.78% | 0.280 | 2.99 | 66 | 86 | 106 | 16 | 11 | 54% | 98.51 |
| 9 (4H) | 56.11 | 22.87 | 8.83 | 2099 | 2.54% | 0.290 | 2.88 | 68 | 86 | 107 | 16 | 11 | 54% | 98.48 |
| 10 (6L) | 57.46 | 20.10 | 10.29 | 2093 | 2.13% | 0.282 | 2.97 | 67 | 86 | 107 | 16 | 11 | 54% | 98.48 |
| 11 (5H) | 56.35 | 19.20 | 10.56 | 2086 | 2.13% | 0.287 | 2.91 | 67 | 86 | 107 | 17 | 11 | 47% | 98.44 |
| 12 (6H) | 55.59 | 15.05 | 13.30 | 2095 | 1.71% | 0.292 | 2.86 | 66 | 86 | 106 | 17 | 11 | 47% | 98.44 |

Note: Pull in 4th(2H) gear was limited due to tractor bounce.

## OECD Drawbar Data (US)

Date of tests: 13-May-92 Fuel density: 6.978 lb/gal
Type of track: Concrete Test number: 1658

| Gear | Power | Pull | Speed | Engine speed | Slip | SFC | | Temperature, deg F | | | | | Rel hum | Pressure |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | hp | lb | mph | rev/min | | lb/hp.h | hp.h/gal | Fuel | Coolant | Oil | Dry | Wet | | in Hg |
| Ia. Maximum Power (ballasted, fwa at 2100 rev/min) | | | | | Tire pressure: | | 13 psig, rear | | 14 psig, front | | Drawbar height | | 19 in | |
| 4 (2H) | 66.36 | 11352 | 2.19 | 2197 | 11.17% | 0.537 | 12.98 | 152 | 184 | 224 | 52 | 45 | 56% | 29.11 |
| 5 (3L) | 75.77 | 9249 | 3.07 | 2109 | 5.01% | 0.475 | 14.69 | 150 | 186 | 224 | 55 | 47 | 50% | 29.11 |
| 6 (3H) | 75.05 | 7068 | 3.98 | 2095 | 3.59% | 0.476 | 14.66 | 150 | 186 | 225 | 57 | 49 | 51% | 29.10 |
| 7 (4L) | 77.10 | 6836 | 4.23 | 2099 | 3.43% | 0.463 | 15.06 | 151 | 186 | 225 | 59 | 50 | 53% | 29.09 |
| 8 (5L) | 77.76 | 5716 | 5.10 | 2098 | 2.78% | 0.460 | 15.16 | 151 | 187 | 222 | 60 | 51 | 54% | 29.09 |
| 9 (4H) | 75.25 | 5141 | 5.49 | 2099 | 2.54% | 0.477 | 14.63 | 155 | 187 | 225 | 61 | 51 | 54% | 29.08 |
| 10 (6L) | 77.05 | 4520 | 6.39 | 2093 | 2.13% | 0.464 | 15.05 | 153 | 187 | 225 | 61 | 51 | 54% | 29.08 |
| 11 (5H) | 75.56 | 4317 | 6.56 | 2086 | 2.13% | 0.472 | 14.78 | 153 | 187 | 225 | 62 | 51 | 47% | 29.07 |
| 12 (6H) | 74.55 | 3383 | 8.26 | 2095 | 1.71% | 0.481 | 14.52 | 151 | 187 | 222 | 63 | 52 | 47% | 29.07 |

Note: Pull in 4th(2H) gear was limited due to tractor bounce.

Repairs : None
Remarks : None