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2008

# Nebraska Summary: S721 New Holland T4030

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# SUMMARY OF OECD TEST 2454 — NEBRASKA SUMMARY 721
# NEW HOLLAND T4030 DIESEL
# 12 SPEED

## POWER TAKE-OFF PERFORMANCE

| Power HP *(kW)* | Crank shaft speed rpm | Gal/hr *(l/h)* | lb/hp.hr *(kg/kW.h)* | Hp.hr/gal *(kW.h/l)* | Mean Atmospheric Conditions |
|---|---|---|---|---|---|
| **MAXIMUM POWER AND FUEL CONSUMPTION** | | | | | |
| **Rated Engine Speed (PTO speed—564 rpm)** | | | | | |
| 66.4 *(49.5)* | 2304 | 4.32 *(16.37)* | 0.456 *(0.277)* | 15.35 *(3.02)* | |
| **Standard Power Take-off speed (539 rpm)** | | | | | |
| 65.3 *(48.7)* | 2202 | 4.31 *(16.31)* | 0.462 *(0.281)* | 15.15 *(2.98)* | |
| **VARYING POWER AND FUEL CONSUMPTION** | | | | | |
| 66.4 *(49.5)* | 2304 | 4.32 *(16.37)* | 0.456 *(0.277)* | 15.35 *(3.02)* | Air temperature |
| 59.5 *(44.4)* | 2432 | 4.03 *(15.25)* | 0.473 *(0.288)* | 14.77 *(2.91)* | 70°F *(21°C)* |
| 45.6 *(34.0)* | 2484 | 3.37 *(12.74)* | 0.516 *(0.314)* | 13.55 *(2.67)* | Relative humidity |
| 30.7 *(22.9)* | 2509 | 2.63 *(9.95)* | 0.599 *(0.364)* | 11.67 *(2.30)* | 64% |
| 15.4 *(11.5)* | 2546 | 1.97 *(7.45)* | 0.889 *(0.541)* | 7.84 *(1.55)* | Barometer |
| -- -- | 2581 | 1.42 *(5.37)* | -- -- | -- -- | 29.9" Hg *(101.1 kPa)* |

Maximum torque -237.2 lb.-ft. *(321.6 Nm)* at 999 rpm
Maximum torque rise -57.0%
Torque rise at 1850 engine rpm -15%

**Location of tests:** Alma Mater Studiorum, University Di Bologna, Via Gandolfi, 19-40057, Cadriano, Bologna, Italy

**Dates of tests:** April, 2008
**Manufacturer:** CNH Italia SpA, Viale delle, Nazioni 55, Modena, Italy

**FUEL and OIL: Fuel** No. 2 Diesel **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.840 **Fuel weight** 6.99 lbs/gal *(0.838 kg/l)* **Oil SAE** 15W40 **API service classification** CH-4 **Transmission and hydraulic lubricant** Akcela Nexplore fluid **Front axle lubricant** Akcela Nexplore fluid

**ENGINE: Make** Iveco Diesel **Type** four cylinder vertical with turbocharger and air to air intercooler **Serial No.** 0003069 **Crankshaft** lengthwise **Rated engine speed** 2300 **Bore and stroke** 3.898" x 4.094" *(99.0 mm x 104.0 mm)* **Compression ratio** 17.5 to 1 **Displacement** 195 cu in *(3200 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat

**CHASSIS: Type** front wheel assist **Serial No.** Z7JA01022 **Tread width** rear 48.5" *(1232 mm)* to 76.7" *(1949 mm)* front 48.7" *(1236 mm)* to 76.6" *(1945 mm)* **Wheel base** 80.2" *(2038 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph*(km/h)*** first 1.42 *(2.28)* second 2.11 *(3.39)* third 2.52 *(4.06)* fourth 3.10 *(4.99)* fifth 3.76 *(6.05)* sixth 4.74 *(7.63)* seventh 5.52 *(8.89)* eighth 7.28 *(11.72)* ninth 8.44 *(13.59)* tenth 10.86 *(17.47)* eleventh 15.96 *(25.68)* twelfth 24.38 *(39.23)* reverse 1.33 *(2.14)*, 1.98 *(3.19)*, 2.37 *(3.81)*, 2.91 *(4.69)*, 3.53 *(5.68)*, 4.46 *(7.17)*, 5.19 *(8.36)*, 6.84 *(11.01)*, 7.93 *(12.76)*, 10.20 *(16.41)*, 14.99 *(24.12)*, 22.90 *(36.85)* **Clutch** dual dry disc operated by foot pedal **Brakes** wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2206 engine rpm or 1000 rpm at 2260 engine rpm **Unladen tractor mass** 7035 lb *(3190 kg)*

## DRAWBAR PERFORMANCE

### (Unballasted - Front Drive Engaged)

### FUEL CONSUMPTION CHARACTERISTICS

| Power Hp *(kW)* | Drawbar pull lbs *(kN)* | Speed mph *(km/h)* | Crank-shaft speed rpm | Slip % | Fuel Consumption lb/hp.hr *(kg/kW.h)* | Hp.hr/gal *(kW.h/l)* | Temp.°F *(°C)* cool-ing med | Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| **Maximum Power—7th (3M)Gear** | | | | | | | | | |
| 56.5 *(42.2)* | 4060 *(18.07)* | 5.22 *(8.40)* | 2295 | 5.9 | 0.529 *(0.322)* | 13.23 *(2.61)* | 201 *(94)* | 77 *(25)* | 30.2 *(102.1)* |
| **75% of Pull at Maximum Power—7th(3M) Gear** | | | | | | | | | |
| 45.5 *(33.9)* | 3040 *(13.52)* | 5.62 *(9.04)* | 2431 | 4.3 | 0.569 *(0.346)* | 12.28 *(2.42)* | 201 *(94)* | 75 *(24)* | 30.2 *(102.1)* |
| **50% of Pull at Maximum Power—7th (3M)Gear** | | | | | | | | | |
| 31.4 *(23.4)* | 2035 *(9.05)* | 5.79 *(9.31)* | 2472 | 3.2 | 0.628 *(0.382)* | 11.13 *(2.19)* | 201 *(94)* | 77 *(25)* | 30.2 *(102.1)* |
| **75% of Pull at Reduced Engine Speed—8th(1H) Gear** | | | | | | | | | |
| 45.7 *(34.1)* | 3045 *(13.55)* | 5.62 *(9.05)* | 1839 | 4.2 | 0.542 *(0.329)* | 12.91 *(2.54)* | 199 *(93)* | 75 *(24)* | 30.2 *(102.1)* |
| **50% of Pull at Reduced Engine Speed—8th(1H) Gear** | | | | | | | | | |
| 31.4 *(23.4)* | 2030 *(9.03)* | 5.80 *(9.33)* | 1875 | 3.1 | 0.623 *(0.379)* | 11.22 *(2.21)* | 199 *(93)* | 77 *(25)* | 30.2 *(102.1)* |
| **MAXIMUM POWER IN SELECTED GEARS** | | | | | | | | | |
| 4th(3L) Gear | | | | | | | | | |
| 46.9 *(35.0)* | 6270 *(27.89)* | 2.81 *(4.52)* | 2432 | 14.9 | 0.558 *(0.339)* | 12.54 *(2.47)* | 198 *(92)* | 77 *(25)* | 30.2 *(102.1)* |
| 5th(2M) Gear | | | | | | | | | |
| 52.1 *(38.8)* | 5565 *(24.75)* | 3.51 *(5.65)* | 2393 | 11.1 | 0.540 *(0.329)* | 12.94 *(2.55)* | 201 *(94)* | 77 *(25)* | 30.2 *(102.1)* |
| 6th(4L) Gear | | | | | | | | | |
| 54.9 *(40.9)* | 4625 *(20.58)* | 4.45 *(7.16)* | 2300 | 6.8 | 0.542 *(0.330)* | 12.89 *(2.54)* | 199 *(93)* | 75 *(24)* | 30.2 *(102.1)* |
| 7th(3M) Gear | | | | | | | | | |
| 56.5 *(42.2)* | 4060 *(18.07)* | 5.22 *(8.40)* | 2295 | 5.9 | 0.529 *(0.322)* | 13.23 *(2.61)* | 201 *(94)* | 77 *(25)* | 30.2 *(102.1)* |
| 8th(1H) Gear | | | | | | | | | |
| 57.4 *(42.8)* | 3060 *(13.61)* | 7.03 *(11.31)* | 2302 | 4.3 | 0.524 *(0.319)* | 13.35 *(2.63)* | 201 *(94)* | 79 *(26)* | 30.2 *(102.1)* |
| 9th(4M) Gear | | | | | | | | | |
| 55.3 *(41.2)* | 2535 *(11.27)* | 8.18 *(13.16)* | 2297 | 3.8 | 0.545 *(0.331)* | 12.84 *(2.53)* | 201 *(94)* | 77 *(25)* | 30.2 *(102.1)* |
| 10th(2H)Gear | | | | | | | | | |
| 54.7 *(40.8)* | 1930 *(8.59)* | 10.62 *(17.09)* | 2303 | 3.1 | 0.547 *(0.333)* | 12.79 *(2.52)* | 203 *(95)* | 77 *(25)* | 30.2 *(102.1)* |

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

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. The performance results on this summary were taken from OECD tests conducted under the OCED Code 2 test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2454,** Nebraska Summary 721, March 19, 2010.

Roger M. Hoy
Director

M.F. Kocher
V.I. Adamchuk
J.A. Smith
Board of Tractor Test Engineers

### TIRES AND WEIGHT

| | **Tested without ballast** |
|---|---|
| **Rear tires–**No., size, ply & psi *(kPa)* | Two 16.9R30;**;23 *(160)* |
| **Front tires–**No., size, ply & psi *(kPa)* | Two 11.2R24;***;23 *(160)* |
| **Height of drawbar** | 19.3 in *(490 mm)* |
| **Static weight with operator**– Rear | 4410 lb *(2000 kg)* |
| – Front | 2790 lb *(1265 kg)* |
| – Total | 7200 lb *(3265 kg)* |

| TRACTOR SOUND LEVEL WITHOUT CAB | FWA dB(A) | 2WD dB(A) |
|---|---|---|
| At no load in 6th (4L) gear | 85.2 | 85.2 |
| Bystander in | -- | -- |

## HYDRAULIC PERFORMANCE

CATEGORY: II
Quick Attach: None
OECD Static test

| | | |
|---|---|---|
| Maximum force exerted through whole range: | 2915 lbs *(12.97 kN)* | |
| | **Standard Pump** | **High flow pump** |
| i) Sustained pressure with relief valve open: | 2815 psi *(194 bar)* | 2880 psi *(199 bar)* |
| ii) Pump delivery rate at minimum pressure: | 13.7 GPM *(52.0 l/min)* | 16.9 GPM *(64.0 l/min)* |
| iii) Pump delivery rate at maximum hydraulic power: | 12.6 GPM *(47.6 l/min)* | 15.0 GPM *(56.7 l/min)* |
| Delivery pressure: | 2450 psi *(169 bar)* | 2420 psi *(167 bar)* |
| Power: | 18.0 hp *(13.4 kW)* | 21.2 hp *(15.7 kW)* |

## THREE POINT HITCH PERFORMANCE (SAE Static Test)

| | |
|---|---|
| Observed maximum pressure psi. *(bar)* | 2975 *(205)* |
| Location: | remote outlets |
| Hydraulic oil temperature: °F *(°C)* | 113 *(45)* |
| Location: | hydraulic sump |
| Category: | II |
| Quick attach: | none |

System pressure 2675 psi *(185 Bar)*

| Hitch point distance to ground level in. *(mm)* | 17.6 *(448)* | 22.0 *(558)* | 26.2 *(665)* | 30.2 *(766)* | 34.4 *(875)* | 38.7 *(983)* |
|---|---|---|---|---|---|---|
| Lift force on frame lb | 4925 | 5105 | 4970 | 4675 | 4180 | 4115 |
| " " " " " " *(kN)* | *(21.9)* | *(22.7)* | *(22.1)* | *(20.8)* | *(18.6)* | *(18.3 )* |

## HITCH DIMENSIONS AS TESTED—NO LOAD

| | SAE TEST | | OECD TEST | |
|---|---|---|---|---|
| | inch | *mm* | inch | *mm* |
| A | 27.2 | *690* | 27.4 | *697* |
| B | 10.0 | *255* | 10.0 | *255* |
| C | 12.3 | *312* | 12.3 | *312* |
| D | 10.9 | *276* | 10.9 | *276* |
| E | 14.2 | *361* | 12.1 | *308* |
| F | 7.5 | *189* | 7.5 | *189* |
| G | 27.6 | *700* | 27.6 | *700* |
| H | 1.4 | *35* | 1.4 | *35* |
| I | 13.4 | *340* | 13.6 | *345* |
| J | 20.1 | *511* | 20.1 | *511* |
| K | 20.6 | *523* | 20.6 | *523* |
| L | 40.7 | *1035* | 40.7 | *1035* |
| M | 21.7 | *550* | 21.7 | *550* |
| N | 34.6 | *880* | 34.6 | *880* |
| O | 17.6 | *448* | 14.4 | *367* |
| P | 39.1 | *994* | 44.1 | *1121* |
| Q | 38.7 | *983* | 40.2 | *1020* |
| R | 22.4 | *570* | 22.5 | *572* |

