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# Tests 2009 & 2010: Case IH JX 55 Diesel

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# SUMMARY OF OECD TESTS 2009 & 2010—NEBRASKA SUMMARY 402
# CASE IH JX 55 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-614 rpm)** | | | | | |
| 45.1 *(33.6)* | 2500 | 2.85 *(10.80)* | 0.433 *(0.263)* | 15.80 *(3.11)* | |
| **Standard Power Take-off Speed (540 rpm)** | | | | | |
| 42.4 *(31.6)* | 2200 | 2.60 *(9.83)* | 0.419 *(0.255)* | 16.33 *(3.22)* | |
| **VARYING POWER AND FUEL CONSUMPTION** | | | | | |
| 45.1 *(33.6)* | 2500 | 2.85 *(10.80)* | 0.433 *(0.263)* | 15.80 *(3.11)* | Air temperature |
| 41.2 *(30.7)* | 2687 | 2.63 *(9.97)* | 0.437 *(0.266)* | 15.63 *(3.08)* | 81°F *(27°C)* |
| 31.2 *(23.3)* | 2715 | 2.10 *(7.96)* | 0.460 *(0.280)* | 14.87 *(2.93)* | Relative humidity |
| 21.1 *(15.7)* | 2753 | 1.62 *(6.13)* | 0.527 *(0.320)* | 13.00 *(2.56)* | 35% |
| 10.6 *(7.9)* | 2770 | 1.20 *(4.55)* | 0.776 *(0.472)* | 8.82 *(1.74)* | Barometer |
| -- -- | 2800 | 0.87 *(3.29)* | -- -- | -- -- | 27.1" Hg *(91.9 kPa)* |

Maximum Torque - 115.3 lb.-ft. *(156.3 Nm)* at 1500 rpm
Maximum Torque Rise - 21.8%
Torque rise at 2000 engine rpm - 12%

## 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—10th (III-2) Gear** | | | | | | | | | |
| 37.8 *(28.2)* | 1645 *(7.31)* | 8.62 *(13.87)* | 2492 | 7.1 | 0.523 *(0.318)* | 13.20 *(2.60)* | 165 *(74)* | 72 *(22)* | 27.1 *(91.9)* |
| **75% of Pull at Maximum Power—10th (III-2) Gear** | | | | | | | | | |
| 30.3 *(22.6)* | 1230 *(5.48)* | 9.22 *(14.83)* | 2654 | 6.7 | 0.612 *(0.373)* | 11.27 *(2.22)* | 165 *(74)* | 72 *(22)* | 27.1 *(91.9)* |
| **50% of Pull at Maximum Power—10th (III-2) Gear** | | | | | | | | | |
| 20.7 *(15.4)* | 825 *(3.66)* | 9.39 *(15.11)* | 2694 | 6.3 | 0.764 *(0.465)* | 9.04 *(1.78)* | 165 *(74)* | 72 *(22)* | 27.1 *(91.9)* |
| **75% of Pull at Reduced Engine Speed—11th (III-3) Gear** | | | | | | | | | |
| Available gear ratios did not allow the running of this test sequence. | | | | | | | | | |
| **50% of Pull at Reduced Engine Speed—11th (III-3) Gear** | | | | | | | | | |
| 20.0 *(14.9)* | 800 *(3.56)* | 9.38 *(15.10)* | 1977 | 6.2 | 0.632 *(0.385)* | 10.91 *(2.15)* | 165 *(74)* | 72 *(22)* | 27.1 *(91.9)* |

**Locations of tests:** DAEMTC (The Directorate of Agricultural Equipment and Machinery Testing Centre) Ankara,Turkey and CNH America LLC Burr Ridge, Il. USA

**Dates of Test:** PTO & Drwb:February - May, 2002
Sound tests: December 3, 2003
Hydraulic flow: August 8, 2003
Lift tests: December 3, 2003

**Manufacturer:** CNH America LLC, 700 State St. Racine, Wi. 53404 USA

**FUEL and OIL: Fuel** No. 2 Diesel **Specific gravity converted to 60°/60° F *(15°/15°C)*** 0.821 **Fuel weight** 6.84 lbs/gal *(0.820 kg/l)* **Oil SAE** 20W-50 **API service classification** CF-4/SG **Transmission and hydraulic lubricant** BP Terrac Tractan 8 fluid **Front axle lubricant** BP Terrac Tractan 8 fluid

**ENGINE: Make** Iveco Diesel **Type** three cylinder vertical **Serial No.** 815558 **Crankshaft** lengthwise **Rated engine speed** 2500 **Bore and stroke** 3.937" x 4.528" *(100.0 mm x 115.0 mm)* **Compression ratio** 17.0 to 1 **Displacement** 165 cu in *(2710 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** paper element **Oil filter** two cartridges **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat

**CHASSIS: Type** 2WD & front wheel assist **Serial No.** 2WD - HFD000001, FWA-HFD000609 **Tread width** rear 56.1" *(1424 mm)* to 75.7" *(1924 mm)* front 2WD- 56.0" *(1422 mm)* to 71.7" *(1822 mm)* FWA-56.9"*(1445 mm)* to 73.8"*(1875 mm)* **Wheel base** 2WD-85.6" *(2175 mm)*, FWA-83.4"*(2119 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph *(km/h)*** first 1.06 *(1.71)* second 1.63 *(2.63)* third 2.22 *(3.58)* fourth 2.48 *(3.99)* fifth 3.19 *(5.13)* sixth 3.82 *(6.15)* seventh 5.20 *(8.37)* eighth 5.84 *(9.40)* ninth 7.44 *(11.98)* tenth 9.00 *(14.48)* eleventh 12.24 *(19.69)* twelfth 17.53 *(28.21)* reverse 1.06 *(1.71)*, 1.64 *(2.64)*, 2.23 *(3.59)*, 2.49 *(4.00)*, 3.20 *(5.15)*, 3.83 *(6.17)*, 5.21 *(8.39)*, 5.86 *(9.43)*, 7.47*(12.02)*, 9.02 *(14.52)*, 12.27 *(19.75)*, 17.59 *(28.30)* **Clutch** dual dry disc operated by foot pedal **Brakes** wet disc operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2200 engine rpm and 1000 rpm at 2382 engine rpm **Unladen tractor mass** 2WD - 5655 lb *(2566 kg)*, FWA - 6075 lb *(2756 kg)*

## DRAWBAR PERFORMANCE
### (Unballasted – Front Drive Engaged)
### MAXIMUM POWER IN SELECTED GEARS

| 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)* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 5th (I-4) Gear | | | | | |
| 29.4 *(21.9)* | 3680 *(16.38)* | 2.99 *(4.81)* | 2661 | 14.8 | 0.653 *(0.397)* | 10.57 *(2.08)* | 167 *(75)* | 66 *(19)* | 27.1 *(91.7)* |
| | | | | 6th (II-2) Gear | | | | | |
| 32.0 *(23.8)* | 3540 *(15.75)* | 3.39 *(5.45)* | 2507 | 14.5 | 0.616 *(0.375)* | 11.21 *(2.21)* | 167 *(75)* | 66 *(19)* | 27.1 *(91.7)* |
| | | | | 7th (II-3) Gear | | | | | |
| 33.0 *(24.6)* | 2540 *(11.29)* | 4.88 *(7.85)* | 2508 | 9.5 | 0.597 *(0.363)* | 11.57 *(2.28)* | 167 *(75)* | 66 *(19)* | 27.1 *(91.7)* |
| | | | | 8th (III-1) Gear | | | | | |
| 34.6 *(25.8)* | 2355 *(10.47)* | 5.51 *(8.86)* | 2505 | 9.0 | 0.571 *(0.347)* | 12.08 *(2.38)* | 167 *(75)* | 66 *(19)* | 27.1 *(91.7)* |
| | | | | 9th (II-4) Gear | | | | | |
| 35.1 *(26.2)* | 1855 *(8.26)* | 7.09 *(11.41)* | 2504 | 8.1 | 0.562 *(0.342)* | 12.28 *(2.42)* | 167 *(75)* | 66 *(19)* | 27.1 *(91.7)* |
| | | | | 10th (III-2) Gear | | | | | |
| 37.8 *(28.2)* | 1645 *(7.31)* | 8.62 *(13.87)* | 2492 | 7.1 | 0.523 *(0.318)* | 13.20 *(2.60)* | 167 *(75)* | 66 *(19)* | 27.1 *(91.7)* |

| TRACTOR SOUND LEVEL WITHOUT CAB | Front Wheel Drive Engaged dB(A) | Front Wheel Drive Disengaged dB(A) |
|---|---|---|
| At no load in 7th(II-3) Gear | 86.6 | 86.5 |
| Bystander | – | – |

| TIRES AND WEIGHT | Tested Without Ballast Front Wheel Assist | 2WD |
|---|---|---|
| **Rear tires -** No.,size, ply & psi(*kPa*) | Two 14.9-30; 6; 22(*150*) | Two 14.9-30; 6; 22 (*150*) |
| **Front tires** - No.,size, ply & psi(*kPa*) | Two 9.5-24; 6; 32(*220*) | Two 7.50-16; 6; 32 *(220)* |
| **Height of Drawbar** | 13.6 in *(345 mm)* | 14.0 in *(355 mm)* |
| **Static Weight with operator-** Rear | 3880 lb (*1760 kg)* | 3960 lb *(1796 kg)* |
| - Front | 2360 lb (*1071 kg)* | 1865 lb *(845 kg)* |
| - Total | 6240 lb (*2831 kg)* | 5825 lb *(2641 kg)* |

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

**NOTE:** The PTO and drawbar results shown on this report are from tests conducted on the New Holland TD 55D.

**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 Code II Test Code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Reports No. **2009** & **2010,**Nebraska Summary 402, January 14, 2004.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
W.P. Campbell
Board of Tractor Test Engineers

# DRAWBAR PERFORMANCE

## (Unballasted - 2WD)

### 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—9th(II-4) Gear** | | | | | | | | | |
| 37.7 | 2055 | 6.88 | 2490 | 9.3 | 0.557 | 12.38 | 167 | 72 | 27.0 |
| *(28.1)* | *(9.14)* | *(11.08)* | | | *(0.339)* | *(2.44)* | *(75)* | *(22)* | *(91.5)* |
| **75% of Pull at Maximum Power—9th(II-4) Gear** | | | | | | | | | |
| 30.9 | 1540 | 7.53 | 2677 | 7.8 | 0.621 | 11.12 | 167 | 72 | 27.0 |
| *(23.1)* | *(6.86)* | *(12.11)* | | | *(0.378)* | *(2.19)* | *(75)* | *(22)* | *(91.5)* |
| **50% of Pull at Maximum Power—9th(II-4) Gear** | | | | | | | | | |
| 21.1 | 1025 | 7.71 | 2725 | 7.2 | 0.724 | 9.53 | 167 | 72 | 27.0 |
| *(15.7)* | *(4.57)* | *(12.40)* | | | *(0.441)* | *(1.88)* | *(75)* | *(22)* | *(91.5)* |
| **75% of Pull at Reduced Engine Speed—10th(III-2) Gear** | | | | | | | | | |
| 31.0 | 1540 | 7.54 | 2221 | 7.8 | 0.522 | 13.22 | 167 | 72 | 27.0 |
| *(23.1)* | *(6.86)* | *(12.14)* | | | *(0.317)* | *(2.60)* | *(75)* | *(22)* | *(91.5)* |
| **50% of Pull at Reduced Engine Speed—10th(III-2) Gear** | | | | | | | | | |
| 21.3 | 1035 | 7.74 | 2258 | 7.0 | 0.562 | 12.28 | 167 | 72 | 27.0 |
| *(15.9)* | *(4.60)* | *(12.45)* | | | *(0.342)* | *(2.42)* | *(75)* | *(22)* | *(91.5)* |
| **MAXIMUM POWER IN SELECTED GEARS** | | | | | | | | | |
| 6th(II-2) Gear | | | | | | | | | |
| 25.2 | 2665 | 3.55 | 2669 | 14.9 | 0.722 | 9.55 | 167 | 75 | 27.0 |
| *(18.8)* | *(11.86)* | *(5.72)* | | | *(0.439)* | *(1.88)* | *(75)* | *(24)* | *(91.5)* |
| 7th(II-3) Gear | | | | | | | | | |
| 32.1 | 2635 | 4.56 | 2516 | 14.8 | 0.615 | 11.22 | 167 | 75 | 27.0 |
| *(23.9)* | *(11.73)* | *(7.34)* | | | *(0.374)* | *(2.21)* | *(75)* | *(24)* | *(91.5)* |
| 8th(III-1) Gear | | | | | | | | | |
| 35.8 | 2535 | 5.29 | 2510 | 11.7 | 0.581 | 11.87 | 167 | 75 | 27.0 |
| *(26.7)* | *(11.27)* | *(8.52)* | | | *(0.354)* | *(2.34)* | *(75)* | *(24)* | *(91.5)* |
| 9th(II-4) Gear | | | | | | | | | |
| 37.7 | 2055 | 6.88 | 2490 | 9.3 | 0.557 | 12.39 | 167 | 75 | 27.0 |
| *(28.1)* | *(9.14)* | *(11.08)* | | | *(0.339)* | *(2.44)* | *(75)* | *(24)* | *(91.5)* |
| 10th(III-2) Gear | | | | | | | | | |
| 35.5 | 1575 | 8.46 | 2504 | 8.3 | 0.589 | 11.73 | 167 | 75 | 27.0 |
| *(26.5)* | *(7.01)* | *(13.61)* | | | *(0.358)* | *(2.31)* | *(75)* | *(24)* | *(91.5)* |

## THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: none
Maximum Force Exerted Through Whole Range: 3775 lbs *(16.8 kN)*

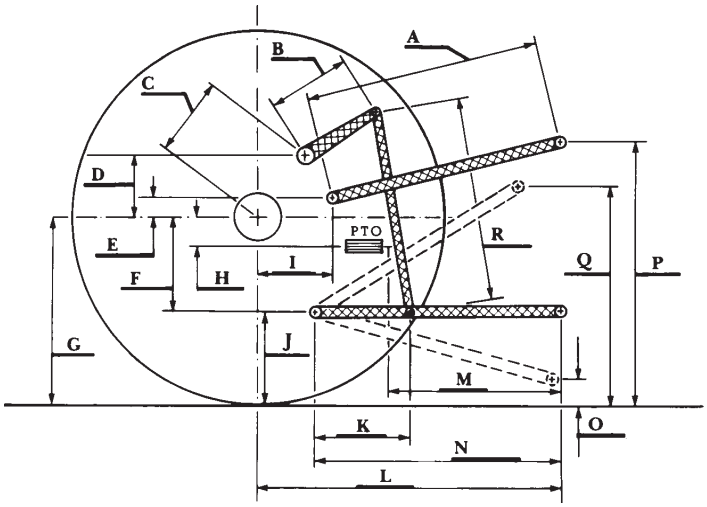
| | | |
|---|---|---|
| i) Opening pressure of relief valve: | NA | |
| Sustained pressure of the open relief valve: | 2680 psi | *(185 bar)* |
| ii) Pump delivery rate at minimum pressure and rated engine speed: | 11.9 GPM | *(45.2 l/min)* |
| iii) Pump delivery rate at maximum hydraulic power: | 9.5 GPM | *(35.9 l/min)* |
| Delivery pressure: | 2314 psi | *(160 bar)* |
| Power: | 12.8 HP | *(9.5 kW)* |

## THREE POINT HITCH PERFORMANCE

| | |
|---|---|
| Observed Maximum Pressure psi. *(bar)* | 2780 *(192)* |
| Location: | hydraulic manifold |
| Hydraulic oil temperature: °F *(°C)* | 149 *(65)* |
| Location: | hydraulic sump |
| Category: | II |
| Quick attach: | none |

**SAE Static Test**—System pressure 2470 psi *(170 Bar)*

| | | | | | |
|---|---|---|---|---|---|
| Hitch point distance to ground level in. *(mm)* | 8.0 *(203)* | 15.0 *(380)* | 22.0 *(558)* | 29.0 *(737)* | 36.0 *(914)* |
| Lift force on frame lb | 5769 | 6055 | 5793 | 6060 | 5147 |
| " " " " " " *(kN)* | *(25.7)* | *(26.9)* | *(25.8)* | *(27.0)* | *(22.9)* |




**HITCH DIMENSIONS AS TESTED—NO LOAD**

| | OECD test | | SAE test | |
|---|---|---|---|---|
| | inch | *mm* | inch | *mm* |
| A | 30.7 | *780* | 30.1 | *765* |
| B | 10.0 | *255* | 10.0 | *255* |
| C | 11.6 | *295* | 11.6 | *295* |
| D | 11.6 | *295* | 11.6 | *295* |
| E | 7.5 | *190* | 9.4 | *240* |
| F | 8.2 | *208* | 8.2 | *208* |
| G | 26.2 | *665* | 24.6 | *625* |
| H | 0.2 | *5* | 0.2 | *5* |
| I | 7.7 | *195* | 7.1 | *180* |
| J | 18.0 | *457* | 16.4 | *417* |
| K | 17.1 | *435* | 22.8 | *580* |
| L | 38.9 | *988* | 38.9 | *988* |
| M | 26.7 | *678* | 26.7 | *678* |
| N | 36.2 | *920* | 36.2 | *920* |
| O | 8.3 | *210* | 8.0 | *203* |
| P | 42.0 | *1067* | 35.4 | *899* |
| Q | 32.2 | *817* | 32.0 | *813* |
| R | 22.8 | *580* | 24.4 | *619* |

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