

NEBRASKA TRACTOR TEST 1938A

CASE IH DX 50 DIESEL

ALSO CASE IH FARMALL 50 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—629 rpm)					
43.62 (32.53)	2802	3.29 (12.46)	0.526 (0.320)	13.26 (2.61)	
Maximum Power(1 hour)					
44.64 (33.29)	2752	3.88 (14.68)	0.606 (0.369)	11.51 (2.27)	
Standard Power Take-off Speed(540 rpm)					
41.54 (30.98)	2406	4.01 (15.18)	0.673 (0.410)	10.36 (2.04)	

VARYING POWER AND FUEL CONSUMPTION

43.62 (32.53)	2802	3.29 (12.46)	0.526 (0.320)	13.26 (2.61)	Air temperature
37.95 (28.30)	2863	2.69 (10.20)	0.495 (0.301)	14.09 (2.77)	78°F (25°C)
28.85 (21.51)	2909	2.11 (7.98)	0.510 (0.310)	13.69 (2.70)	Relative humidity
19.48 (14.52)	2938	1.63 (5.17)	0.585 (0.356)	11.92 (2.35)	19%
9.78 (7.29)	2970	1.22 (4.61)	0.869 (0.529)	8.03 (1.58)	Barometer
0.90 (0.67)	2993	0.85 (3.20)	6.587 (4.007)	1.06 (0.21)	28.51"Hg (96.55 kPa)

Maximum torque 95 lb.-ft. (129 Nm) at 1799 rpm
 Maximum torque rise -16.1%
 Torque rise at 2201 rpm -14%

TRACTOR SOUND LEVEL WITHOUT CAB

	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 7th (M3) gear	92.6	92.8
Bystander in 12th (H4) gear	83.5	--

TIRES AND WEIGHT

Rear Tires—No., size, ply & psi (kPa)
Front Tires—No., size, ply & psi (kPa)
Height of Drawbar
Static Weight with operator—Rear
 — Front
 — Total

Tested Without Ballast

Two 17.5L-24; 8:12 (85)
 Two 10-16.5; 6:20 (135)
 15.0 in (380 mm)
 2165 lb (982 kg)
 1440 lb (653 kg)
 3605 lb (1635 kg)

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln Nebraska 68583-0832

Dates of Test: December 2-3, 2008.

Manufacturer: CNH America LLC, 700 State Street, Racine, Wi. 53404

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8380 Fuel weight 6.977 lbs/gal (0.836 kg/l) Oil SAE 15W40 API service classification CI-4 Transmission and hydraulic lubricant Case IH Hytran ultra fluid Front axle lubricant Case IH Hytran ultra fluid Total time engine was operated 9.5 hours

ENGINE: Make ISM Diesel Type four cylinder vertical Serial No. 64407 Crankshaft lengthwise Rated engine speed 2800 Bore and stroke 3.307" x 3.937" (84.0 mm x 100.0 mm) Compression ratio 22.4 to 1 Displacement 135 cu in (2216 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 Fuel filter one paper element Muffler underhood Exhaust horizontal Cooling medium temperature control one thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 20.5 - 23.1 lb/h (9.3 - 10.5 kg/h) High idle: 2975 - 3075 rpm

CHASSIS: Type front wheel assist Serial No. Z8DB06603 Tread width rear 51.2" (1301 mm) to 67.4" (1712 mm) front 49.3" (1252 mm) Wheelbase 73.5" (1867 mm) Hydraulic control system direct engine drive Transmission selective gear fixed ratio Nominal travel speeds mph (km/h) first 1.04 (1.67) second 1.32 (2.12) third 1.65 (2.66) fourth 2.17 (3.50) fifth 2.81 (4.53) sixth 3.58 (5.76) seventh 4.47 (7.20) eighth 5.92 (9.52) ninth 7.31 (11.76) tenth 9.31 (14.99) eleventh 11.64 (18.73) twelfth 15.37 (24.73) reverse 1.16 (1.87), 1.48 (2.38), 1.85 (2.97), 2.44 (3.93), 3.15 (5.07), 4.01 (6.46), 5.01 (8.07), 6.62 (10.66), 8.20 (13.19), 10.43 (16.80), 13.04 (20.99), 17.22 (27.72) Clutch single dry disc operated by foot pedal Brakes single wet disc operated by two foot pedals which can be locked together Steering hydrostatic Power take-off 540 rpm at 2405 engine rpm Unladen tractor mass 3430 lb (1556 kg)

HYDRAULIC PERFORMANCE

CATEGORY: I

Quick Attach: None

OECD Static test

Maximum force exerted through whole range: 2350 lbs (10.5 kN)

i) Sustained pressure of the open relief valve: 2502 psi (173 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed: 9.4 GPM (35.4 l/min)

iii) Pump delivery rate at maximum hydraulic power: 9.0 GPM (33.9 l/min)

Delivery pressure: 2055 psi (142 bar)

Power: 10.7 HP (8.0 kW)

REPAIRS AND ADJUSTMENTS: It was necessary to block the throttle lever to maintain high idle engine rpm settings.

NOTE: The performance results on this report were obtained from tests carried out on the New Holland T2330 Diesel.

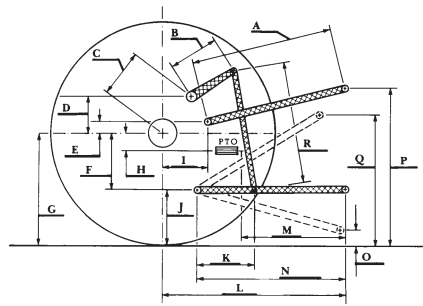
REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. This tractor did not meet the manufacturer's claim of 9.8 GPM (37.1 lpm) hydraulic flow. For the maximum power tests, the fuel return temperature was maintained at 139°F (60°C).

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. 1938A, May 1, 2009.

Roger M. Hoy
Director

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

	inch	mm
A	23.1	587
B	11.0	280
C	12.4	315
D	13.5	313
E	12.3	280
F	4.7	118
G	23.1	586
H	0.8	20
I	9.9	251
J	18.4	468
K	14.8	375
L	32.4	822
M	21.6	549
N	31.8	807
O	7.9	200
P	36.5	927
Q	30.9	784
R	18.7	475



HITCH DIMENSIONS AS TESTED - NO LOAD



CASE IH Farmall 50 Diesel

Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln