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2008

Test 1935: New Holland TV6070

Nebraska Tractor Test Lab

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NEBRASKA OECD TRACTOR TEST 1935 - SUMMARY 609

NEW HOLLAND TV6070 DIESEL

HYDROSTATIC

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—1074 rpm)					
106.73 (79.59)	2200	8.59 (32.51)	0.564 (0.343)	12.43 (2.45)	
Standard Power Take-off Speed (1000 rpm)					
112.77 (84.09)	2048	8.38 (31.70)	0.520 (0.317)	13.46 (2.65)	
Maximum Power (1 Hour)					
115.85 (86.39)	1850	7.96 (30.12)	0.481 (0.293)	14.56 (2.87)	

VARYING POWER AND FUEL CONSUMPTION

106.73 (79.59)	2200	8.59 (32.51)	0.564 (0.343)	12.43 (2.45)	Air temperature
95.11 (70.92)	2323	8.28 (31.33)	0.610 (0.371)	11.49 (2.26)	
73.67 (54.94)	2366	7.21 (27.31)	0.686 (0.417)	10.21 (2.01)	Relative humidity
49.18 (36.67)	2374	6.10 (23.07)	0.868 (0.528)	8.07 (1.59)	
24.94 (18.59)	2393	4.81 (18.21)	1.352 (0.822)	5.18 (1.02)	Barometer
3.53 (2.63)	2399	3.64 (13.78)	7.230 (4.398)	0.97 (0.19)	

Maximum torque -483 lb.-ft. (655 Nm) at 1100 rpm

Maximum torque rise -90.2%

Torque rise at 1799 engine rpm -32%

Power increase at 1850 engine rpm -8.5%

DRAWBAR PERFORMANCE

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—2nd Range									
80.25 (59.84)	6072 (27.01)	4.96 (7.98)	2200	1.7	0.750 (0.456)	9.34 (1.84)	192 (89)	66 (19)	29.01 (98.24)
75% of Pull at Maximum Power—2nd Range									
66.21 (49.37)	4559 (20.28)	5.45 (8.76)	2324	1.0	0.847 (0.515)	8.27 (1.63)	193 (89)	66 (19)	29.01 (98.24)
50% of Pull at Maximum Power—2nd Range									
46.87 (34.95)	3080 (13.70)	5.71 (9.19)	2374	0.7	1.048 (0.638)	6.69 (1.32)	193 (89)	67 (19)	29.01 (98.24)
75% of Pull at Reduced Engine Speed—3rd Range									
65.58 (48.90)	4550 (20.24)	5.41 (8.70)	1736	0.9	0.653 (0.397)	10.73 (2.11)	187 (86)	66 (19)	29.01 (98.24)
50% of Pull at Reduced Engine Speed—6th Range									
47.02 (35.07)	3045 (13.54)	5.79 (9.32)	1389	0.5	0.637 (0.388)	11.00 (2.17)	184 (84)	68 (20)	29.01 (98.24)

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

Dates of tests: September 4 - 10, 2008

Manufacturer: Case Corporation, 700 State Street Racine, Wi. 53404 USA.

FUEL, OIL and TIME: Fuel No. 2 Diesel Specific gravity converted to 60°/60° F (15°/15°C) 0.8416 Fuel weight 7.007 lbs/gal (0.840 kg/l) Oil SAE 15W40 API service classification CI-4 Transmission and hydraulic lubricant NH Ambra Multi G134 fluid Front and rear axle lubricant NH Ambra Multi G 134 fluid Total time engine was operated 25.0 hours

ENGINE: Make CNH/NEF Diesel Type six cylinder vertical with turbocharger and air to air aftercooler Serial No. 51552 Crankshaft lengthwise Rated engine speed 2200 Bore and stroke 4.094" x 5.197" (104.0 mm x 132.0 mm) Compression ratio 17.5 to 1 Displacement 410 cu in (6728 ml) Starting system 12 volt Lubrication pressure Air cleaner two paper elements and aspirator Oil filter one full flow cartridge Oil cooler engine coolant heat exchanger for crankcase oil, radiator for transmission and hydraulic oil Fuel filter one paper element Muffler underhood Exhaust vertical Cooling medium temperature control thermostat

ENGINE OPERATING PARAMETERS: Fuel rate: 56.2 - 62.0 lb/h (25.5 - 28.1 kg/h) High idle: 2380 - 2420 rpm Turbo boost: nominal 18.9 - 21.8 psi (130 - 150 kPa) as measured 19.3 psi (133 kPa)

CHASSIS: Type four wheel drive Serial No. *RSV0057149* Tread width rear 60.0" (1525 mm) to 80.0" (2030 mm) front 60.0" (1525 mm) to 80.0" (2030 mm) Wheelbase 118.1" (3000 mm) Hydraulic control system direct engine drive Transmission infinitely variable hydrostatic using a variable displacement pump and motor with 8 ranges. Nominal travel speeds mph (km/h) first 0-6.7 (0-10.8) second 0-7.7 (0-12.4) third 0-8.3 (0-13.3) fourth 0-9.1 (0-14.6) fifth 0-10.3 (0-16.6) sixth 0-11.6 (0-18.7) seventh 0-17.5 (0-28.1) eighth 0-19.7 (0-31.7) reverse 0-6.7 (0-10.8), 0-7.7 (0-12.4), 0-8.3 (0-13.3), 0-9.1 (0-14.6), 0-10.3 (0-16.6), 0-11.6 (0-18.7), 0-17.5 (0-28.1), 0-19.7 (0-31.7) Clutch none Brakes caliper disc hydraulically actuated by foot pedal Steering hydrostatic and articulated Power take-off 540 rpm at 1890 engine rpm or 1000 rpm at 2049 engine rpm Unladen tractor mass 15205 lb (6897 kg)

DRAWBAR PERFORMANCE
MAXIMUM POWER AT SELECTED SPEEDS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
63.32 (47.22)	11815 (52.56)	2.01 (3.23)	2278	6.2	1st Range 0.967 (0.588)	7.25 (1.43)	192 (89)	49 (9)	29.03 (98.31)
83.62 (62.35)	10452 (46.49)	3.00 (4.83)	1855	3.4	1st Range 0.678 (0.413)	10.33 (2.04)	190 (88)	51 (11)	29.02 (98.27)
85.77 (63.96)	9455 (42.06)	3.40 (5.47)	1856	3.0	1st Range 0.658 (0.400)	10.66 (2.10)	191 (88)	53 (12)	29.02 (98.27)
87.29 (65.09)	8137 (36.19)	4.02 (6.47)	1854	2.3	1st Range 0.645 (0.392)	10.87 (2.14)	190 (88)	58 (14)	29.02 (98.27)
87.39 (65.17)	7435 (33.07)	4.41 (7.09)	1840	2.2	1st Range 0.645 (0.392)	10.87 (2.14)	190 (88)	56 (13)	28.86 (97.73)
86.83 (64.75)	6925 (30.80)	4.70 (7.57)	1945	2.0	2nd Range 0.669 (0.407)	10.47 (2.06)	190 (88)	60 (16)	29.02 (98.27)
86.14 (64.23)	6499 (28.91)	4.97 (8.00)	2027	1.6	2nd Range 0.685 (0.417)	10.22 (2.01)	191 (88)	59 (15)	29.02 (98.27)
84.16 (62.76)	6139 (27.31)	5.14 (8.27)	2069	1.5	3rd Range 0.700 (0.426)	10.01 (1.97)	191 (88)	63 (17)	29.02 (98.27)
81.45 (60.74)	5531 (24.60)	5.52 (8.89)	2151	1.3	4th Range 0.738 (0.449)	9.50 (1.87)	191 (88)	66 (19)	29.02 (98.27)
78.88 (58.82)	4887 (21.74)	6.05 (9.74)	2080	1.2	5th Range 0.754 (0.458)	9.30 (1.83)	191 (88)	63 (17)	28.87 (97.76)
78.80 (58.76)	4221 (18.78)	7.00 (11.27)	2165	0.9	6th Range 0.769 (0.468)	9.11 (1.79)	191 (88)	66 (19)	29.02 (98.27)
77.07 (57.47)	3586 (15.95)	8.06 (12.97)	2166	0.6	6th Range 0.784 (0.477)	8.94 (1.76)	192 (89)	66 (19)	29.02 (98.27)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests, the fuel temperature at the primary fuel filter was maintained at 99°F (37°C). This tractor did not meet the manufacturer's claim of 30.0 GPM (113 l/min) hydraulic flow. The manufacturer's 3 point lift claim of 8700 lbs (3950 kg) was not verified. The manufacturer's claim of 35 GPM (133 lpm) hydraulic flow with optional pump was not verified. The performance figures on this Summary were taken from a test conducted under the OECD Code II test procedure.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **1935**, Nebraska Summary 609, December 2, 2008.

Roger M. Hoy
Director

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

TRACTOR SOUND LEVEL WITH CAB

	dB(A)
At no load in 3rd range	79.7
Bystander	--

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 480/85R34; **; 23 (160)
Two 480/85R34; **; 23 (160)
21.0 in (535 mm)
8180 lb (3710 kg)
7200 lb (3266 kg)
15380 lb (6976 kg)

HYDRAULIC PERFORMANCE **Three point lift data taken from tests conducted on the** **New Holland TV-140(Nebraska summary 323)**

CATEGORY: II

Quick Attach: None

OECD Static test

Maximum force exerted through whole range: 5440 lbs (24.2 kN)(cab end)(one boost cylinder)

4450 lbs (19.8 kN)(engine end)

i) Sustained pressure of the open relief valve: 3058 psi (210 bar)

ii) Pump delivery rate at minimum pressure

at 2210 engine rpm: 29.5 GPM (111.6 l/min)

at 2390 engine rpm: 31.9 GPM (120.8 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 28.3 GPM (107.1 l/min)

Delivery pressure: 2851 psi (197 bar)

Power: 47.0 HP (35.1 kW)

THREE POINT HITCH PERFORMANCE(SAE Static test)

Observed maximum pressure psi.(bar) 3090(213)

Location: lift cylinder

Hydraulic oil temperature: °F(°C) 150(65)

Location: hydraulic sump

Category: II

Quick attach: none

Cab end

System pressure 2770 psi (191 Bar)

Hitch point distance to ground level in.(mm) 8.0(203) 13.4(341) 21.3(541) 29.2(741) 37.0(941)

Lift force on frame lb 9395 9330 8275 7935 6720

" " " " " (kN) (41.8) (41.5) (38.8) (35.3) (29.9)

Engine end

System pressure 2770 psi (191 Bar)

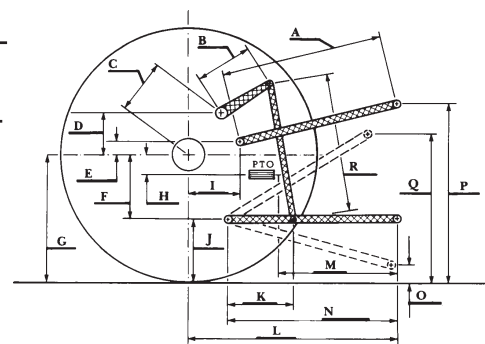
Hitch point distance to ground level in.(mm) 8.0(203) 14.1(359) 22.0(559) 29.9(759) 37.8(959)

Lift force on frame lb 12115 9035 7060 5825 5150

" " " " " (kN) (53.9) (40.2) (31.4) (25.9) (22.9)

HITCH DIMENSIONS AS TESTED - NO LOAD

	Cab end		Engine end	
	inch	mm	inch	mm
A	27.8	705	20.7	525
B	10.0	254	16.9	430
C	14.0	356	15.1	383
D	13.4	341	9.4	240
E	8.5	215	15.6	395
F	9.0	229	8.3	211
G	30.3	770	30.3	770
H	3.8	96	3.8	96
I	12.8	325	31.0	788
J	21.3	541	22.0	559
K	16.2	412	18.3	465
L	40.0	1017	51.7	1313
M	22.1	561	NA	NA
N	36.0	915	36.0	915
O	7.9	200	7.9	200
P	45.3	1051	46.0	1169
Q	37.2	945	36.4	925
R	30.3	770	22.5	572



New Holland TV 6070 Diesel

Institute of Agriculture and Natural Resources
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