PAMI

OECD NO. 2/1 885

Date of Approval: February 17, 2000

REPORT OF TEST IN ACCORDANCE WITH **OECD RESTRICTED CODE** (CODE II)
FOR THE OFFICIAL TESTING OF AGRICULTURAL TRACTORS



NEW HOLLAND 9282 4-WD ARTICULATED

Manufactured by: New Holland Canada Ltd.
Versatile Farm Equipment Operations
Box 7300; 1260 Clarence Ave.
Winnipeg, Manitoba; Canada; R3C 4E8

Date of Test: January 27, 1999

PRAIRIE AGRICULTURAL MACHINERY INSTITUTE

Test Station: P.O. Box 1060
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Manufacturer's Name and Address:	New Holland Canada, Ltd. Versatile Farm Equipment Operations Box 7300, 1260 Clarence Ave. Winnipeg, Manitoba; Canada R3C 4E8
Location of tractor assembly plant:	Winnipeg, MB, Canada
Submitted for test by:	Manufacturer
Selected for test by:	Manufacturer, with agreement of the test station
Place of running in:	Versatile Farm Equipment test track Sanford, Manitoba.
Duration of running in:	64 hours
Location of test:	PTO and hydraulic power lift tests carried out at, Prairie Agricultural Machinery Institute (PAMI); Portage la Prairie, MB, Canada. Drawbar performance and noise tests carried out at the manufacturer's premises Versatile Farm Equipment test track Sanford, Manitoba and witnessed by D.J. May, P.Eng., Project Engineer and K.A. Carmichael, Technical Services Manager (PAMI-Portage la Prairie).

1. SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

Make/Model/Type:	New Holland/9282/4-Wheel drive, Articulated
Number of driving members:	Two
Serial Nº:	D107959
1st Serial Nº:	Confidential

1.2 ENGINE

Make/Model/Type:	Cummins/6CTA 8.3-260/Diesel, turbocharged, aftercooled, direct injection
Serial Nº:	45767565

1.2.1 Cylinders

Number/disposition:	6 in-line, vertical
Bore/Stroke:	114 mm/135 mm (4.5/5.3 in.)
Capacity:	8268 cm^3 (504.5 in^3)
Compression ratio:	16.7:1
Arrangement of valves:	Overhead
Cylinder liners:	Wet (replaceable liners)

1.2.2 Supercharging

Make/Model:	Holset/HT40/Exhaust gas driven turbo
Pressure:	152 to 186 kPa (45 to 55 in Hg)

1.2.3 Fuel System

Fuel feed system:	Engine driven transfer pump
Make/model/type of fuel filters:	Fleetguard/FS1212/single element, spin on Fleetguard/FF5052/single element, spin on
Capacity of fuel tank:	927 L (245 US gal)
Fuel cooler:	None
Make/model/type of injection pump:	Bosch/ROV450/In-line
Serial Nº:	39267760006
Manufacturer's production setting of injection pump:	12.32 - 12.72 mm
Flow rate (rated engine speed and full load):	44.9 $^{+2.1\ kg/h}_{-2.3\ kg/h}$ (99.0 $^{+4.6\ lb/h}_{-5.1\ lb/h}$)
Fuel density:	.838 to .858 kg/L (6.99 to 7.16 lb/US gal)
Timing:	3.5 degrees BTDC
Make/model/type of injectors:	Cummins/PTD/cam actuated
Injection pressure:	96.5 MPa (14000 psi)

1.2.4 Governor

Make/model/type:	Cummins/centrifugal fly weight, integral to fuel pump
Governed range of speed:	950 to 1000 rev/min
Rated engine speed:	2200 rev/min
High Idle speed range:	2415 to 2505 rev/min

1.2.5 Air cleaner

Pre-cleaner:	
Make/model/type:	Donaldson/H001926/Stratatube exhaust aspirated
Location of air intake:	Integral with air cleaner
Main Cleaner:	
Make/model/type:	Donaldson/STB 14 0228/Dual element
Location of air intake:	Mounted under hood
Maintenance indicator:	Electronic restriction indicator mounted on tube of air cleaner, indication light located in cab on instrument panel.

1.2.6 Lubrication system

Type of feed pump:	Full pressure, positive displacement
Type of filter:	Spin on
Number:	One
Oil cooler:	Oil to water, plate type, engine mounted

1.2.7 Cooling system

Type of coolant:	50/50 water/glycol based anti-freeze
Type of pump:	Belt driven centrifugal pump
Specification of fan:	Belt driven suction fan
Number of fan blades:	8
Fan diameter:	660 mm
Coolant capacity:	55L (14.5 US gal)
Type of temperature control:	Thermostat
System pressure:	48 kPa (7.0 psi)

1.2.8 Starting system

Make/model/type:	Delco Remay/42MT/Electric motor
Starter motor power rating:	6.5 kW (8.7 hp)
Cold starting aid:	Optional engine coolant heater and Ether spray to intake manifold
Safety device:	PTO off, Park brake on, Transmission in neutral to start tractor

1.2. 9 Electrical system

Voltage:	12 Volt, negative ground
Alternator:	
Make/model/type:	Delco Remy/30 Si
Power:	12 Volt, 130 amp
Battery (number of accumulators):	Three, (SAE Group 31)
	950 cca at -18°C cold crank capacity (SAE J537 rating)
Rating:	120 Ah each at 20 h rating

1.2.10 Exhaust system

Make/model/type:	Donaldson/M090753 G4/aspirating
Location:	Mounted on rear of front R/H fender, mounted vertically

1.3 TRANSMISSION TO WHEELS

1.3.1 Clutch (travel alone)

Make/Model/Type:	Versatile/integral with gear box/Hydraulic, multi-disc, wet
Number of plates:	6
Diameter of plates:	280 mm (11 in)
Method of operation:	Hydraulic/Pedal actuated

1.3.2 Gear box

Make/Model/Type:	Versatile/TM78EV/12 Speed, Mechanical
Description:	

	Forward	Reverse
Number of gears	4	4
Number of ranges/groups	3	1
Total of arrangements	12	4

Available options:	None
Oil Cooler:	Heat exchanger with air, front of rad

1.3.3 Rear axle and final drives

Make/Model/Type:	Versatile/22130(differential)/Outboard planetary
Differential lock:	Optional
Type:	Electrical motor operated mechanical clutch
Method of engagement:	R/H console mounted switch
Method of disengagement:	Same

1.3.4 Front axle and final drives:

Make/model/type:	Versatile/22130(differential)/Outboard planetary
Differential lock:	Optional, same as rear axle

1.3.5 Total Ratios and travelling speeds

Group or Range	Gear No.	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed(*) at rated engine speed of 2200 rev/min km/hr	(mph)
Low (L)	1	159.814	4.44	2.76
	2	136.591	5.19	3.22
	3	117.156	6.05	3.76
	4	100.632	7.05	4.38
Medium (M)	1	88.060	8.05	5.00
	2	75.268	9.42	5.85
	3	64.562	10.98	6.82
	4	55.449	12.79	7.94
High (H)	1	42.492	16.69	10.37
	2	36.344	19.51	12.12
	3	31.156	22.76	14.14
	4	26.764	26.50	16.47
Reverse (R)	1	123.333	5.75	3.57
	2	105.435	6.72	4.18
	3	90.420	7.84	4.87
	4	77.656	9.13	5.67

* Calculated with a tire dynamic radius index of 855 mm (ISO 4251-1:1992)
Number of revolutions of front wheels for one revolution of rear wheels : 1.0

1.4 POWER TAKE-OFF

1.4.1 Main power take-off

Type:	Independent/wet/multi-plate
Method of engagement:	Electro-hydraulic/Modulated engagement/controlled from console
Number of shafts:	One at rear of tractor in vertical median plane
Method of changing power take-off	None
Shaft ends and speeds:	

1.4.1.1 Power take-off proportional to engine speed at 1000 rev/min

Location:	Rear of tractor in vertical median plane 43.5 mm below centerline of wheels 638 mm behind rear wheel axis.
Diameter of power take-off shaft end:	44.5 mm (1.75 in)
Number of splines in conformity/not in conformity with ISO 500:1991:	20 in conformity with ISO 500:1991
Height above ground:	746 to 872 mm depending on tire option
Distance from the median plane of the tractor:	0 mm
Distance behind rear-wheel axis:	638 mm (25.1 in)
PTO speed at rated engine speed (2200 rev/min):	996.9 rpm
Engine speed at standard power take-off speed:	2106.5 rpm
Ratio of rotation speeds (engine speed/PTO speed):	2.1065
Direction of rotation (viewed from behind tractor):	Clockwise

1.4.1.2 Power take-off proportional to ground speed: None

1.4.2 Optional power take-off None

1.5 POWER LIFT

Make/Model/Type:	Versatile/No Model Number/Cat 3,4N
Type of hydraulic system:	Closed center, load sensing, variable flow
Number/Type/Size of cylinders (single- or double-acting):	Two/Single acting/104.6 mm dia x 330.2 mm stroke
Type of linkage lock for transport:	Electro-hydraulic
Relief valve pressure setting (tolerance):	19.7 ± 0.3 MPa (2800 to 2900 psi)
Opening pressure of cylinder safety valve (if fitted):	None
Lift pump type:	Variable displacement piston pump with supplemental flow from a fixed displacement gear pump on demand.
Transmission between pump and engine:	Direct drive at engine accessory drive
Type and number of filters:	Two - canister type replaceable elements and a cleanable suction screen inside oil reservoir.
Site of oil reservoir:	Beneath engine-75.7 L (20 US gal)
Type, number and location of tapping points:	Leverless, quick disconnect, 4 sets (5 optional)/rear of tractor
Maximum volume of oil available to external cylinders:	19.3 L (5.1 US gal)

1.6 THREE-POINT LINKAGE

Category: 3/4N, in conformity with 3 wide/4 narrow of ISO 730/3 - 1982

Category adapter: Reverse lower links; install alternate bushings at hitch points

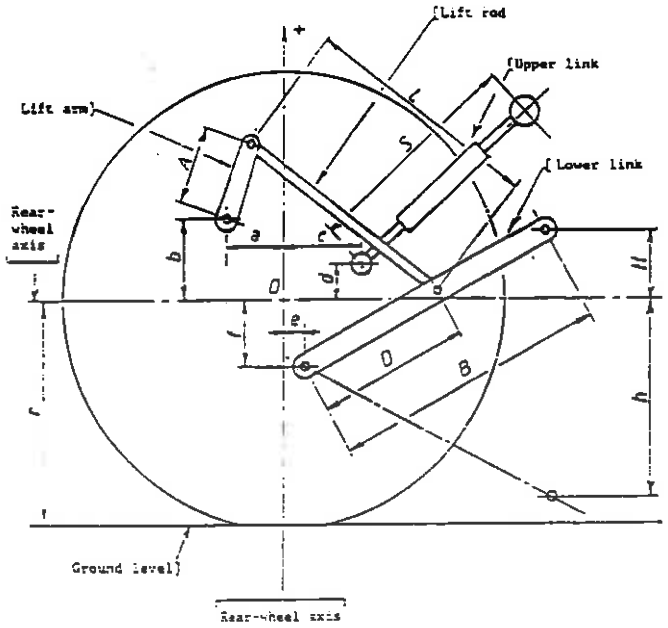


Figure 1.1 Lift test - Linkage geometry

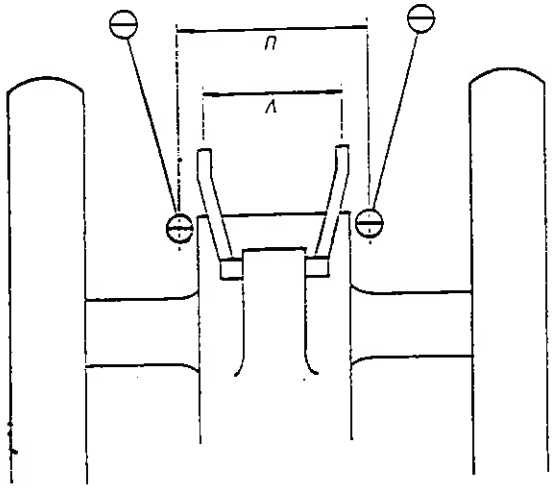


Figure 1.2 Lift Test - Linkage Geometry

Table 1.1 - Linkage geometry dimensions (when connected to standard frame)

		Dimension or range (mm)	Settings used in test	
			Main test (mm)	ASAE/SAE (mm)
Rear tire - radius index	(r)	855	855	855
Front tire - radius index	(r')	855	855	855
Length of arms	(A)	472	472	472
Length of Lower links	(B)	1092	1092	1092
Distance of lift arm pivot point from rear wheel axis:				
horizontally	(a)	-486	-486	-486
Vertically	(b)	483	483	483
Horizontal distance between the 2 lower link points	(u)	945	945	945
Horizontal distance between the 2 lift arm end points	(v)	954	954	954
Length of upper link	(s)	660 to 838	705	705
Distance of upper link pivot point from rear wheel axis:				
Horizontally	(c)	655	642	642
Vertically	(d)	341 or 214	341	341
Distance of lower link pivot point from rear wheel axis:				
Horizontally	(e)	264	264	264
Vertically	(f)	263	263	263
Distance of lower link pivot points to lift rod pivot points on lower links	(D)	457 or 635	457	457
Length of lift rods	(L)	737 to 877	842	873
Height of lower hitch points relative to the rear-wheel axis				
in low position	(h)	419 to 695	625	652
in high position	(H)	356 to 141	195	314
Height above ground of lower hitch points when locked in transport position (*)	Any height within lift range - Electro-hydraulic lock			

* Assuming r = tire dynamic radius index of 855 mm (ISO 4251-1:1992)

1.7 SWINGING DRAWBAR

Type:	Swinging clevis type of drawbar meeting Category 4 hitches. (SAE J1548)
Height above ground:	
Maximum:	419 to 544 mm depending on tire option (top mounted clevis)
Minimum:	279 to 404 mm depending on tire option (bottom mounted clevis)
Type of adjustment:	
Vertical:	Top or bottom mounted clevis
Horizontal:	Manual slide
Distance of hitch point from rear wheel axis, horizontally:	1145 mm
Distance of hitch point from Power take-off shaft end:	
Vertical:	328 mm (top mounted clevis) or 467.5 mm (bottom mounted clevis)
Horizontal:	507 mm behind PTO
Lateral adjustment (centre of clevis):	
Right-hand:	
Standard drawbar cage:	413.5 mm
Optional 3PH drawbar cage:	213.5 mm
Left-hand:	
Standard drawbar cage:	413.5 mm
Optional 3PH drawbar cage:	213.5 mm
Distance of pivot point from rear wheel axis, horizontally:	1335 mm ahead of rear wheel axis
Diameter of drawbar pin hole:	50.8 mm (2 in diameter)
Maximum vertical permissible load:	14.6 kN (3290 lbs)

1.8 TRAILER HITCH

None

1.9 HOLED DRAWBAR

None

1.10 STEERING

Make/Model/Type:	Eaton/92226/hydrostatic open center steering valve
Method of operation:	Articulated Tractor
Pump(s):	Gear pump
Ram(s):	
Maximum working pressure:	17.2 MPa (2500 psi)

1.11 BRAKES

1.11.1 Service brake:

Make/Model/Type:	Kelsey Hayes/D00-1179/dry disc
Method of operation:	Hydraulic Boosted, in cab pedals
Trailer Braking Take-off:	Not Available

1.11.2 Parking brake

Type:	Caliper
Method of operation:	Mechanical, in cab

1.12 WHEELS

Number:	
Front:	Two (restricted), Four (duals)
Rear:	Two (restricted), Four (duals)
Wheelbase:	3380 mm (133 in)

Track width adjustment:

	Minimum	Maximum	Adjustment Method
Front	1829 mm (72.0 in)	2556 mm (100.6 in)	Reverse wheel and off-set lug rims/
Rear	1829 mm (72.0 in)	2556 mm (100.6 in)	add dual tires with drums

1.13 PROTECTIVE STRUCTURE

Make/Model/Type:	Versatile/9703124/safety cab
Manufacturer's name and address:	New Holland Canada, Ltd. Versatile Farm Equipment Operations Box 7300, 1260 Clarence Ave. Winnipeg, Manitoba; Canada R3C 4E8
Protective device:	Cab
Tiltable/Not Tiltable:	Not tiltable
OECD approval number:	CSS 0290/8
Date of approval:	August 21, 1997
Modification Certificate if any:	CSS 0290/1 to 4 MOD 1/CDN (PAMI) CSS 0290/1 to 4 MOD 2/CDN (PAMI)

1.14 SEAT

1.14.1 Driver's Seat

Make/Model/Type:	Sears/2000/Low profile air suspension
Seat and Steering Wheel reversible:	No
Type of suspension:	Air-electric air compressor
Type of damping:	Fluid/adjustable
Range of adjustment:	
Rotation:	28° to the right of center, 90° to left of center
Longitudinal:	178 mm (7.0 in)
Vertical:	76 mm (3.0 in)
Safety Belt:	yes

1.14.2 Optional and Passenger Seats: Not available

1.15 LIGHTING

	Height of centre above ground mm	Size mm	Distance from out side edge to median plane of tractor mm
Headlights	2140	145 x 80	400
Sidelights	2060	170 x 105	1160
Rear fender	2110	170 x 105	1020
Signal Lights	3355	160 x 70	370
Optional Clearance Lights	2135	165 x 110	Adj. 1730 to 2330
Optional Cab Light	3195	170 x 105	450
Brake Light	1940	185 x 65	925

* Height of lights will vary with selection of tires. Tire used for above is 20.8 R38.

2. TEST CONDITIONS

2.1 OVERALL DIMENSIONS (unballasted tractor)

	Length	Width		Height at top of:	
	(mm)	Minimum (mm)	Maximum (mm)	Protective Structure (mm)	Exhaust Silencer (mm)
Unballasted	6750	2307	3814	3426	3671
Ballasted	6750	2307	3814	3426	3671

2.2 Ground clearance (unballasted):

Clearance limiting part: Drawbar cage (352 mm)

2.3 TRACTOR MASS (with cab)

	Unballasted (kg)	
	Without Driver	With Driver
Front	6804	6842
Rear	4448	4485
Total	11252	11327

2.3.1 BALLAST DETAILS

No ballast was added for the test

2.4 TRACK SPECIFICATIONS:

Not Applicable

2.5 TIRE SPECIFICATIONS

	Front	Rear
Tires:	18.8R x 38	18.8R x 38
-make	Armstrong	Armstrong
-dimensions	541 x 1852 mm	541 x 1852 mm
-ply rating	2 Star	2 Star
-maximum load (tire manufacturer)	31.5 kN at 165 kPa (7080 lbs at 24 psi)	31.5 kN at 165 kPa (7080 lbs at 24 psi)
-maximum load (tractor manufacturer)	Same	Same
-inflation pressure (tire manufacturer)	165 kPa (24 psi)	165 kPa (24 psi)
-dynamic radius index	855 mm (33.7 in)	855 mm (33.7 in)
-chosen track width, inner tires	1829 mm	1829 mm

2.6 OILS AND LUBRICATION

2.6.1 Capacity and change interval

	Capacity		Oil Change	Filter Change
	L	(US gal)		
Engine	21.7	(5.7)	250	250
Transmission (with pto option)	41.6	(11.0)	1500	500
Rear axle (with final drive)	48.0	(12.7)	500	no filter
Front axle (with final drive)	48.0	(12.7)	500	no filter
Hydraulic system (with 3PH option)	124.9	(33.0)	1500	500
Brakes	0.896	(0.24)	as required	no filters
Steering	Same as hydraulic system		500	no filter

2.6.2 Specifications (SAE, API, Mil.L, ISO)

	Recommended	Used during the test
Engine oil . type: . viscosity: . classification:	New Holland Spec. 86050227 15W - 40 API CF-4	Petro Canada - Super Plus 15W-40 (Meets New Holland Spec. 86050227)
Transmission oils . type: . viscosity: . classification:	New Holland Spec. 9627251 54 cSt at 40°C to 8.9 cSt at 100°C (min) Not available	Esso - Hydraul 56 (Meets New Holland Spec. 9627251)
Hydraulic fluid	Same as transmission	Same as transmission
Rear axle and final drive oil - type: - viscosity: - classification:	New Holland Spec. 86050042 80W-90 API GL5	Esso - Hydraul 56 (Meets New Holland Spec. 9627251)
Front axle and final drive oil	Same as rear axle	Same as rear axle
Steering oil	Same as transmission	Same as transmission
Brake Fluid	DOT 3	DOT 3

2.6.3 Grease:

Type: Lithium base EP high temperature

Number of lubrication points: 30 with out PTO, (39 with PTO)

2.7 FUEL

Type: No. 2, diesel in conformity with national standard.

Density at 15°C (60°F): 0.855 g/cm^3 (7.135 lb/US gal)

3. COMPULSORY TEST RESULTS

3.1 MAIN POWER TAKE-OFF TEST

Date and location of tests: January 27, 1999
Prairie Agricultural Machinery Institute
Portage la Prairie, MB; CANADA

Dynamometer: AW Dynamometer Inc.
Water Brake Dynamometer

Power	Speed		Fuel Consumption			Specific Energy
	Engine	PTO	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/l
3.1.1 MAXIMUM POWER - TWO-HOUR TEST						
174.2	2000	949	47.3	55.78	271	3.12
3.1.2 POWER AT RATED ENGINE SPEED						
157.9	2200	1045	46.9	55.29	297	2.86
3.1.3 STANDARD POWER TAKE-OFF SPEED (1000 ± 25 rev/min) (reduced throttle)						
170.8	2100	997	48.4	57.03	283	2.99
3.1.4 PART LOADS 3.1.4.1 the torque corresponding to maximum power at rated engine speed						
157.9	2200	1045	46.9	55.29	297	2.86
3.1.4.2 85% of torque obtained in 3.1.4.1						
140.3	2301	1092	44.6	52.65	318	2.66
3.1.4.3 75% of torque defined in 3.1.4.2						
107.3	2344	1113	37.2	43.85	346	2.45
3.1.4.4 50% of torque defined in 3.1.4.2						
72.7	2384	1132	29.8	35.19	410	2.07
3.1.4.5 25% of torque defined in 3.1.4.2						
37.0	2427	1152	22.4	26.39	605	1.40
3.1.4.6 unloaded						
5.6	2462	1169	16.0	18.85	2876	0.30
3.1.5 PART LOADS AT STANDARD POWER TAKE-OFF SPEED (1000 rev/min) 3.1.5.1 the torque corresponding to maximum power (reduced throttle)						
170.8	2100	997	48.4	57.03	283	2.99
3.1.5.2 85% of torque obtained in 3.1.5.1						
149.3	2161	1026	43.9	51.73	294	2.89
3.1.5.3 75% of torque defined in 3.1.5.2						
114.6	2210	1049	36.1	42.53	315	2.69
3.1.5.4 50% of torque defined in 3.1.5.2						
78.2	2262	1074	28.6	33.73	366	2.32
3.1.5.5 25% of torque defined in 3.1.5.2						
40.0	2315	1099	21.0	24.75	525	1.62
3.1.5.6 unloaded						
6.2	2353	1117	14.7	17.36	2378	0.36

No load maximum engine speed:	2462 rev/min
Torque (equivalent crankshaft) at maximum power:	831 Nm
- at rated engine speed	685 Nm
- at standard power take-off speed	777 Nm
Maximum torque (equivalent crankshaft):	1011 Nm at 1269 rev/min
Mean atmospheric conditions:	
- temperature:	20°C
- pressure:	97.41 kPa
- relative humidity:	91%
Maximum temperatures:	
- coolant:	84°C
- engine oil:	106°C
- fuel:	42°C
- engine air intake:	42°C

3.2 HYDRAULIC POWER AND LIFTING FORCE

Date of tests: November 8, 1996 confirmed January 27, 1999
Location of Test: Prairie Agricultural Machinery Institute
Portage la Prairie, Manitoba; Canada

3.2.1 Hydraulic Power Tests

Sustained pressure with relief valve open: 19.9 Mpa (2886 psi)
Pump delivery rate at minimum pressure: 165.7 l/min

	Flow Rate l/min	Pressure MPa	Power kW
Flow rate corresponding to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting and corresponding hydraulic power	84.4	17.9	25.1
Flow rate and hydraulic pressure corresponding to maximum hydraulic power	151.8	15.9	40.2

Tapping point used for test: Two remote hydraulic couplers
Temperature of hydraulic fluid: 65 ± 5°C
There is no opening or closing pressure of the unloading valve since this hydraulic system does not use an accumulator

3.2.2 Power Lift Test

Linkage settings for test - See Table 2.1 and Figures 2.1 and 2.2

	at the hitch point	on the frame
Height of lower hitch points above ground in down position	230 mm	222 mm
Vertical movement without load	820 mm	965 mm
Vertical movement with load	740 mm	908 mm
Maximum corrected force exerted through full range	101.4 kN	68.0 kN
Corresponding pressure of hydraulic fluid	17.9 MPa	17.9 Mpa
Moment about rear-wheel axis	137.5 kNm	133.7 kNm
Maximum tilt angle of mast from vertical		11°

Lifting heights relative to the horizontal plane including the lower link pivot points													
mm	-370	-362	-300	-200	-100	0	+100	+200	+300	+378	+400	+500	+538
Lifting forces													
at the hitch points in kN	–	116.0	114.8	112.9	110.9	108.9	106.9	104.9	103.0	101.4	–	–	–
Corresponding pressure:	17.9 Mpa												
at the frame in kN	114.1	–	111.0	105.9	100.8	95.4	90.3	85.2	80.1	–	75.1	70.0	68.0
Corresponding pressure:	17.9 Mpa												

3.3 DRAWBAR PERFORMANCE

Date of tests: September 22, 1999
Location of tests: Versatile Farm Equipment Operations Test Track
Sanford, MB; Canada

Drawbar Height: 437 mm
Tire Pressure: Front: 83 kPa
Rear: 55 kPa

Gear and Range	Power	Drawbar Pull	Ground Speed	Engine Speed	Slip of Tires	Specific Fuel Consumption	Specific Energy	Temperatures			Atmospheric Conditions		
								Fuel	Coolant	Engine Oil	Temperature	Humidity	Pressure
	kW	KN	Km/h	Rev/min	%	g/kWh	kWh/l	°C	°C	°C	°C	%	kPa
3.3.1 MAXIMUM POWER IN TESTED GEARS													
L1	123.0	109.3	4.05	2272	13.3	373	2.28	40	79	101	20	64	98.07
L2	142.6	111.3	4.61	2147	10.8	335	2.54	42	79	102	20	64	98.07
L3	155.6	108.6	5.16	2000	7.9	307	2.77	39	79	102	22	57	97.97
L4	162.3	93.2	6.27	2000	3.8	292	2.91	40	80	103	22	57	97.97
M1	162.5	80.8	7.24	2000	2.8	293	2.90	41	80	102	22	57	97.97
M2	164.0	69.1	8.54	2001	2.0	290	2.93	40	80	102	24	48	97.93
M3	163.9	59.1	9.99	2001	1.4	290	2.94	40	81	103	24	48	97.93
M4	162.1	50.1	11.66	1999	1.2	293	2.91	41	81	103	24	48	97.93
3.3.2 FUEL CONSUMPTION													
3.3.2.1 in selected gear, at maximum power at rated speed													
L4	149.6	77.04	6.99	2199	2.5	315	2.70	43	81	103	24	36	97.92
3.3.2.1.1 75% of pull at maximum power at rated speed													
L4	118.7	57.75	7.40	2309	1.8	345	2.47	41	81	102	24	36	97.92
3.3.2.1.2 50% of pull at maximum power at rated speed													
L4	81.6	38.55	7.62	2361	1.0	401	2.12	472	80	101	24	36	97.92
3.3.2.1.3 next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.1.1													
M1	118.2	57.74	7.37	2014	1.7	299	2.84	40	79	101	18	48	98.05
3.3.2.1.4 next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.1.2													
M1	81.2	38.51	7.59	2060	1.0	340	2.50	40	79	99	18	48	98.05
3.3.2.2 in selected gear nearest to 7.5 km/h at rated speed													
M1	149.0	66.87	8.02	2199	2.06	316	2.69	41	81	103	24	36	97.92
3.3.2.2.1 75% of pull at maximum power at rated speed													
M1	118.0	50.09	8.48	2309	1.4	347	2.45	43	81	103	24	36	97.92
3.3.2.2.2 50% of pull at maximum power at rated speed													
M1	81.1	33.47	8.72	2360	0.8	409	2.08	44	80	101	24	36	97.92
3.3.2.2.3 next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.2.1													
M2	117.2	50.10	8.42	1961	1.41	295	2.89	40	79	101	20	48	98.05
3.3.2.2.4 next higher gear at reduced engine speed; same pull and travelling speed as in 3.3.2.2.2													
M2	80.8	33.45	8.69	2010	0.8	334	2.55	39	79	99	20	48	98.05

4.0 OPTIONAL TESTS

4.1 POWER LIFT TEST (SAE J283 Jun 93)

Linkage settings for test - See Table 2.1 and Figure 2.1 and 2.2

	at the hitch point	on the frame
Height of lower hitch points above ground in down position	203 mm	196 mm
Vertical movement without load (with adjustment)	966 mm	1115 mm
Vertical movement with load (with adjustment)	913 mm	1085 mm
Maximum corrected force exerted through full range	97.3 kN	59.7 kN
Corresponding pressure of hydraulic fluid	17.9 MPa	117.4 kNm
Moment about rear-wheel axis	131.9kNm	117.4 kNm
Maximum tilt angle of mast from vertical		9°

Lift rods were adjusted during the test in order to make lift range.

Lifting heights relative to the horizontal plane including the lower link pivot points														
mm	-396	-389	-300	-200	-100	0	+100	+200	+300	+400	+500	+528	+600	+689
Lifting forces (the values of force measured shall be corrected to correspond to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting of the hydraulic lift system.).														
at the hitch pints in kN	–	115.9	114.1	112.1	110.0	108.0	106.0	104.0	102.0	99.9	97.9	97.3	–	–
Corresponding pressure:						17.9 Mpa								
at the frame In kN	115.4	–	110.5	105.3	100.2	95.1	89.9	84.8	79.6	74.5	69.4	–	64.2	59.7
Corresponding pressure:						17.9 Mpa								

4.2 POWER LIFT TEST (ASAE S349.2)

Linkage settings for test - See Table 2.1 and Figures 2.1 and 2.2

	at the hitch point	on the frame
Height of lower hitch points above ground in down position	203 mm	196 mm
Vertical movement without load (with adjustment)	966 mm	1115 mm
Vertical movement with load (with adjustment)	917 mm	1085 mm
Maximum corrected force exerted through full range	105.1 kN	64.4 kN
Corresponding pressure of hydraulic fluid	19.3 MPa	19.3 Mpa
Moment about rear-wheel axis	142.5 kNm	126.6 kNm
Maximum tilt angle of mast from vertical		9°

Lift rods were adjusted during the test in order to make lift range.

Lifting heights relative to the horizontal plane including the lower link pivot points														
mm	-396	-389	-300	-200	-100	0	+100	+200	+300	+400	+500	+528	+600	+689
Lifting forces (the values of force measured shall be corrected to correspond to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting of the hydraulic lift system.).														
at the hitch pints in kN	–	125.1	123.2	121.0	118.8	116.6	114.5	112.3	110.1	107.9	105.7	105.1	–	–
Corresponding pressure:						19.3 Mpa								
at the frame In kN	124.7	–	119.4	113.8	108.2	102.7	97.1	91.6	86.0	80.4	74.9	–	69.3	64.4
Corresponding pressure:						19.3 Mpa								

4.3 NOISE TESTS (Nebraska Test)

Date of tests:	September22, 1999
Location of tests:	Versatile Farm Equipment Test Track Sanford, Manitoba; Canada
Sound level meter Make/Model/Type:	Bruel & Kjaer/Model T2236/Precision Integrating
Type of track:	Concrete
Noise at operator ear 75% pull at maximum power rated speed noise level:	78.4 dB(A)
Gear Number:	M1

5. REPAIRS

None

6. REMARKS

None

7. ANNEX (CURVES)

Tests carried out by: D.S. Petkau, P.Ag., P.Eng., MBA, Project Manager
T.W. Selley, Project Leader
K.A. Carmichael, Project Technologist

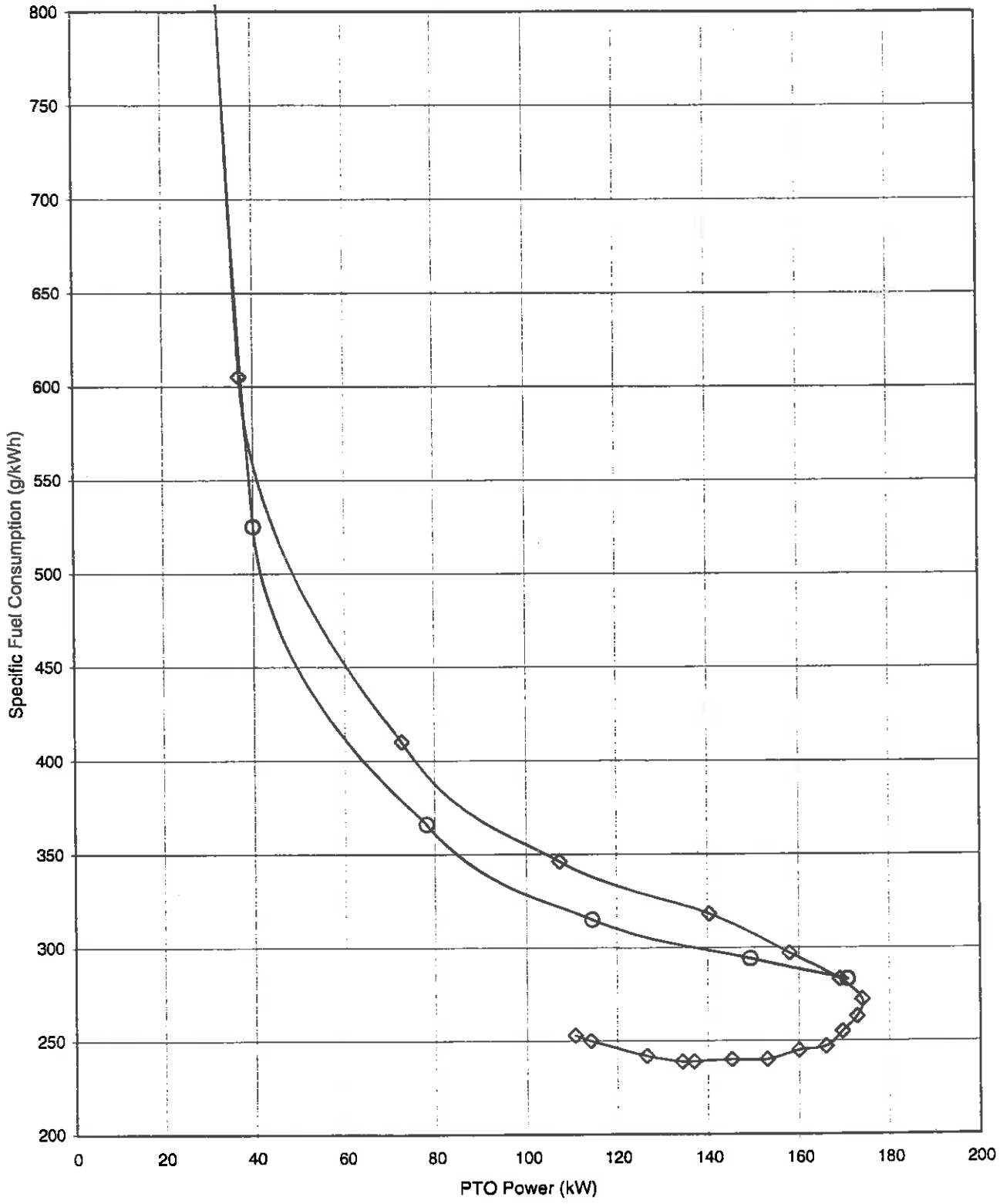
Signed:

Donald S. Petkau, P.Ag., P.Eng., MBA, Project Manager

Doug May, P.Eng., Station Manager

Date: March 13, 2000

NEW HOLLAND 9282 TRACTOR



NEW HOLLAND 9282 ARTICULATED TRACTOR

