Consiglio Nazionale delle Ricerche
ISTITUTO PER LA MECCANIZZAZIONE AGRICOLA
Strada delle Cacce, 73 - 10135 TORINO (Italy)

OECD Approval No.: 1/1 946
Date of Approval: 26th February 2001
Report No.: 2687/T/2000

TEST IN ACCORDANCE WITH THE OECD CODE 1 FOR THE OFFICIAL TESTING OF AGRICULTURAL TRACTORS

Make:	**New Holland**
Trade Name:	**TN 70 D**
Type:	**4 WD, 30 km/h, 8+8 speeds**
Manufacturer denomination:	**9467R7Q3AGM**

Reference text: **O.E.C.D. Code 1 – 2000**



Manufactured by:	**NEW HOLLAND ITALIA S.p.A.** **Viale delle Nazioni, 55** **41100 MODENA (Italy)**
Date and location of the tests:	**2000 TORINO (Italy)**

This report has been approved by the O.E.C.D. Co-ordinating Centre (CEMAGREF, France) as being in accordance with the O.E.C.D. Tractor Test Code.

This report is based on engineering tests in accordance with O.E.C.D. Code 1.
It does not contain an evaluation of performance of the tractor on practical farm work.
In this report all performance characteristics are given corresponding to the International System of Units.

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0 FOREWORDS

Tractor manufacturer's name and address:	NEW HOLLAND ITALIA S.p.A. Viale delle Nazioni, 55 41100 MODENA (Italy)
Location of tractor assembly:	Jesi (AN) - ITALY
Submitted for test by:	The Manufacturer
Selected for test by:	Manufacturer with the agreement of IMA
Place of running-in:	MODENA (MO) - ITALY
Duration of running-in:	Appr. 50 hours
Location of tests :	IMA - Torino - italy

1 SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

Make:	NEW HOLLAND
Model:	TN 70 D
Type:	4 WD, 30 km/h, 8+8 speeds
Number of driving wheels:	4
Manufacturer denomination:	9467R7Q3AGM
Serial N°:	001203572
1st serial N°:	001132233

1.2 ENGINE

Make:	NEW HOLLAND
Model:	IVECO 8035.25 R 520
Type:	direct injection, compression ignition, 4 cycle
Serial N°:	663654

1.2.1 Cylinders

Number and disposition:	3, vertical, in line
Bore x stroke:	104 x 115 mm
Capacity:	2930 cm^3
Compression ratio:	18±0.5:1
Arrangement of valves:	overhead
Cylinder liners:	dry

1.2.2 Supercharging

Supercharger:	GARRET make, TA 2504 type
Pressure:	0.078 MPa

1.2.3 Fuel system

Fuel feed system:	AC CORONA fuel feed pump
Make, model and type of fuel filter(s):	N° 1 NEW HOLLAND make, with replaceable cartridge and n°1 mesh filter inside the fuel feed pump
Capacity of fuel tank:	70 l, placed under the tractor platform, on the left side
Make/Model/Type of injection pump:	BOSCH make, L764-2 type, rotary injection pump
Serial N°:	643597

Manufacturer's production setting of injection pump	
-flow rate:	64.30 mm^3/stroke at rated speed and full load corresponding to 13.31 dm^3/h
-timing:	Inlet start 12° before TDC and end after 31° after BDC Exhaust start 50° before BDC and end 16° after TDC
Make/Model/Type of injectors:	BOSCH make, DLLA 132 S type, multihole injection nozzles
Injection pressure:	26.0±1 MPa for BOSCH DLLA 132 S
Make/Model/Type of carburettor:	none

1.2.4 Governor

Make, model and type:	BOSCH make, mechanical type, incorporated in the fuel pump
Governed range of engine speed:	750-2525 rev/min
Rated engine speed:	2300 rev/min

1.2.5 Air cleaner

Pre-cleaner:	none
Main filter	
- Make:	NEW HOLLAND
- Model:	Own drawn dis. 5157064
- Type:	dry air filter, with double cartridge
Location of air intake:	on front of the radiator under the bonnet cowling
Maintenance indicator:	with the warning lamp on the dashboard

1.2.6 Lubrication system

Type of feed pump:	forced feed by means of gear pump. Engine oil cooling is provided by a heat exchanger using engine coolant
Type of filter(s):	replaceable cartridge type, installed on the pressure line of the engine and wire mesh type, installed on the pump suction line.
Number of filters:	2

1.2.7 Cooling System

Type of coolant:	water
Specification of fan:	propeller fan driven by engine shaft
Number of fan blades:	6
Fan diameter:	420 mm
Coolant capacity:	12 litres
Type of temperature control:	a temperature gauge, with display on the dashboard, alerts the operator to potential problems
Superpressure system:	71 kPa

1.2.8 Starting system

Make and model:	MARELLI 4807375
Type:	solenoid operate
Starter motor power rating:	3.5 kW
Cold starting aid:	LUCAS make, thermostart type
Safety device:	clutch engagement

1.2.9 Electrical system

Voltage:	12 V, negative earth
Generator	
- Make:	MARELLI
- Model:	Alternator
- Type:	AA108
- Power:	2.8 kW
Battery:	1, lead acid type
Rating:	100 Ah at 20 hours

1.2.10 Exhaust system

Make, model and type:	NEW HOLLAND, 5172688, interference type with internal perforated pipe
Location:	on the left hand side of engine, under the bonnet cowling, with the vertical exhaust pipe above the bonnet cowling
Height of outlet above ground:	2320 mm

1.3 TRANSMISSION

1.3.1 Clutch

Make:	VALEO
Model:	none
Type:	dry double disc
Number of plates:	2
Diameter of plates:	280 mm
Method of operation:	mechanically operated by pedal

1.3.2 Gearbox

Make:	NEW HOLLAND
Model:	own drawing
Type:	mechanical, syncronized constant mesh gears, direct engagement by hand levers

	Forward	Reverse
Number of gears	4	4
Number of ranges	2 (slow and fast)	2 (slow and fast)
Number of groups	none	none
Total of arrangements	8	8

1.3.3 Rear axle and final drives

Make:	NEW HOLLAND
Model:	own drawing
Type:	bevel gear differential and epyciclic final drivers
Rear differential lock	
- Make:	NEW HOLLAND
- Model:	own drawing
- Type:	mechanical engagement
- Method of engagement/ disengagement:	locking device control pedal on the right side of the floor

1.3.4 Front axle and final drives

Make:	NEW HOLLAND
Model:	own drawing
Type:	centrally pivoted
Front differential lock	
- Make:	NEW HOLLAND
- Model:	own drawing
- Type:	mechanical engagement
- Method of engagement/disengagement:	mechanical by an hand lever on the left side of the floor near the seat

1.3.5 Total ratios and travelling speeds

Gear no.	Group or range	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2300 rev/min (km/h)
FORWARD			
1	Slow	254.260	2.369
2	Slow	170.566	3.531
3	Slow	116.031	5.191
4	Slow	78.321	7.690
1	Fast	64.927	9.277
2	Fast	43.555	13.830
3	Fast	29.629	20.330
4	Fast	20.000	30.120

Gear no.	Group or range	Number of engine revolutions for one revolution of the driving wheels	Nominal travelling speed at rated engine speed of 2300 rev/min (km/h)
REVERSE			
1	Slow	262.462	2.295
2	Slow	176.068	3.421
3	Slow	119.774	5.029
4	Slow	80.847	7.450
1	Fast	67.021	8.987
2	Fast	44.960	13.400
3	Fast	30.585	19.690
4	Fast	20.645	29.170

Number of revolutions of front wheels for one revolution of rear wheels: 1.349

1.4 POWER TAKE OFF

1.4.1 Main power take-off

Type:	independent
Method of engagement:	engaged or disengaged by hand lever, driven by the second plate of the double plate dry clutch
Number of shafts:	1
Method of changing power take-off shaft ends:	removing 3 bolts, swopping shaft and replacing bolts
Method of changing speed:	by mean of lever on the rear left side of the drive line housing

1.4.1.1 Power take-off proportional to engine speed

540 rev/min

Location:	at the rear of the tractor, in the median plane
Diameter of power take-off shaft end:	35 mm
Number of splines:	6, in conformity with ISO 500-1991 Type 1
Height above ground:	665 mm
Distance from the median plane of the tractor:	0
Distance behind rear-wheel axis:	485 mm
PTO speed at rated engine speed (2300 rev/min):	565 rev/min
Engine speed at standard power take-off speed:	2198 rev/min
Ratio of rotation speeds (engine speed/p.t.o. speed):	4.07
Power restriction:	none
Maximum torque transmissible:	maximum torque available
Direction of rotation (viewed from behind tractor):	clockwise

1000 rev/min

Optional, not fitted on tested tractor

1.4.1.2 Power take-off proportional to ground speed

Optional, not fitted on tested tractor

1.4.2 Optional power take-off

Not applicable

1.5 HYDRAULIC POWER LIFT

1.5.1 Rear power lift

Make, model and type:	Own make, draft, position, mixed draft and position control operated by two independent levers; there is a lift-o-matic device to raise and to low in a fast way the lower links
Type of hydraulic system:	open centre system
Type and number of cylinders:	1, single acting, internal
Type of linkage lock for transport:	lift-o-matic device
Relief valve pressure setting:	19±1 MPa
Opening pressure of anti-shock valve:	22±0.5 MPa
Lift pump make and type:	rotative pump driven by the engine shaft. BOSCH make, 25 type (delivery rate of 63.8 l/min with pump at 2484 min^{-1}, as stated by the tractor manufacturer)
Transmission between pump and engine:	mechanical
Number and type of filters:	1, replaceable paper cartridge
Site of oil reservoir:	gear-box
Oil capacity:	42 dm^3, in common with gearbox
Number, type and location of tapping points:	4 tapping points, 2 oil circuits for single or double acting cylinders, at rear of tractor
Maximum volume of oil available to external cylinders:	10 dm^3

1.5.2 Front power lift

Optional. Not fitted on tested tractor

1.6 THREE POINT LINKAGE

1.6.1 Rear three point linkage

Category: 2nd, implement attachment with three point linkage and lower links with quick connection, in conformity with I.S.O. STANDARD 730-1:1994 + Cor.1:1995 and ISO 730-2:1979

Category adapter: none

Table 1. Dimension of rear linkage geometry (when connected to the standard frame)

		Dimension or range	Settings used in test
		mm	mm
Length of lift arms	(A)	255	255
Length of lower links	(B)	880	880
Distance of lift arm pivot point from rear wheel axis			
- horizontally (rearward)	(a)	145	145
- vertically	(b)	276	276
Horizontal distance between the 2 lower link points	(u)	405	405
Horizontal distance between the 2 lift arm end points	(v)	700	700
Length of upper link	(S)	from 555 to 770	675
Distance of upper link pivot point from rear wheel axis			
- horizontally (rearward)	(c)	340-345	340
- vertically	(d)	308-261	308
Distance of lower link pivot point from rear wheel axis			
- horizontally	(e)	155	155
- vertically	(f)	189	189
Distance of lower link pivot points to lift rod pivot points on lower links	(D)	523	523
Length of lift rods	(L)	from 570 to 690	655
Height of lower hitch points relative to the rear wheel axis:			
- in low position	(h)	495	495
- in high position	(H)	105	105
Height above ground of lower hitch points when locked in transport position*		800	800

* Assuming the dynamic radius index of 480/70 R 30 rear tyres: 695 mm (Not in conformity with ISO 4251-1:1998)

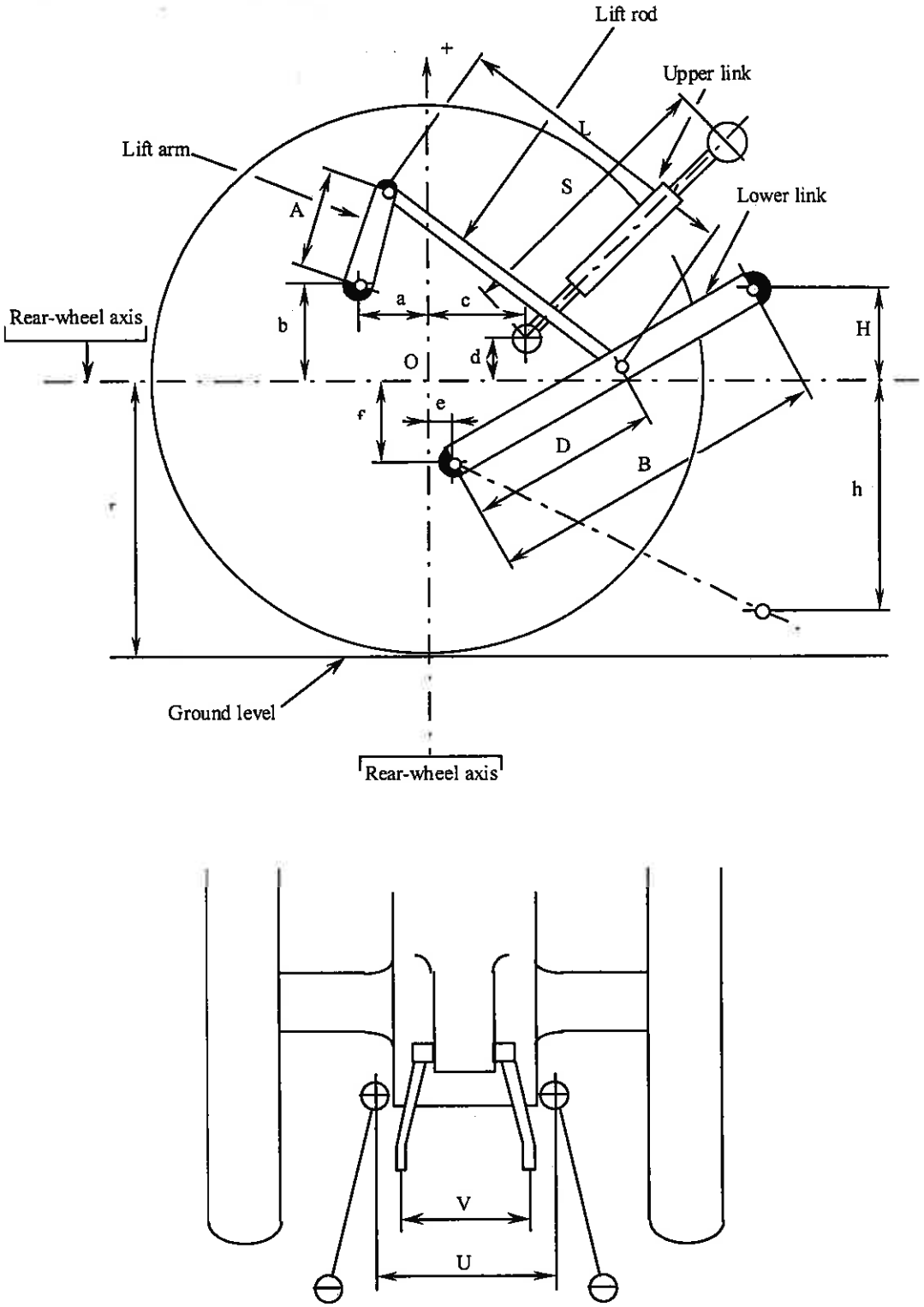


Figure 1. Lift test- Rear linkage geometry

1.7 SWINGING DRAWBAR

Optional, not fitted on tested tractor

1.8 TRAILER HITCH

Type:	DGM-GA 4168 C
Hole diameter:	28 mm
Height above ground:	
- minimum:	455 mm
- maximum:	959 mm
Distance of hitch point from rear wheel axis horizontally:	656 mm
Distance of hitch point from power take-off shaft end:	
- vertically:	216 mm
- horizontally:	171 mm
Maximum vertical permissible load:	14.7 kN

1.9 HOLED DRAWBAR

Option. Not fitted on tested tractor

1.10 STEERING

Make/Model/Type:	DANFOSS make, ORBITROL OSPC 80 ON model, hydrostatic type
Method of operation:	
- pump:	hydrostatic steering with BOSCH hydraulic gear pump
- rams:	single acting ram acting directly on front axle
Working pressure:	17 MPa

1.11 BRAKES

1.11.1 Service brake:

Make/Model:	NEW HOLLAND, 694.130.000
Type:	oil bath disc, total 2 discs, 1 for wheel at rear, mounted on differential shaft. Rear disc 259 mm Ø, FRENDO HDT 303 lining material
Method of operation:	hydraulically actuated with 2 pedals
Trailer braking take-off:	hydraulic brake system

1.11.2 Parking brake:

Type:	fully independent of service brake, 1 oil bath disc mounted on the pinion shaft in the gear box
Method of operation:	mechanical by hand lever

1.11.3 Steering brake:

Divided pedal of service brake, for normal unlocked together

1.12 WHEELS

Number:
- front: 2, driving and steering
- rear: 2 driving

Wheelbase: 2065 mm

Track width adjustment:

	Minimum	Maximum	Adjustment method
	mm	mm	
Front	1382	1812	Changing the position of the rims with respect to the disc
Rear	1420	1920	Changing the position of the rims in respect to the disc

1.13 PROTECTIVE STRUCTURE

Make, model and type: NEW HOLLAND make, TS51 model
Manufacture's name and address: NEW HOLLAND ITALIA S.p.A.
Viale delle Nazioni, 55
41100 MODENA
(Italy)

Protective device: Rear non folding roll bar
OECD approval
- number: not yet approved
- date of approval: none

1.14 SEAT

1.14.1 Driver's seat

Make/Model/Type: GRAMMER make, MSG 44/520 model, upholstered seat with back rest

Seat and steering wheel reversible: no
Type of suspension: adjustable spring
Type of damping: shock absorber
Range of adjustment
- longitudinal: 150 mm
- vertical: 60 mm

Safety belt: yes

1.14.2 Optional driver's seat

None

1.14.3 Passenger seat

Location: none
Number of places: none

1.15 LIGHTING

	Height above ground of centre	Size	Distance from outside edge of lights to median plane of tractor
	mm	mm	mm
Headlights	1175	225x100	280
Front direction indicators	1635	105x110	580
Rear parking lights	1610	65x100	620
Rear direction indicators	1635	105x110	580

2 TEST CONDITIONS

2.1 OVERALL DIMENSIONS

	Length	Width		Height at top of	
		minimum	maximum	frame	exhaust silencer
	mm	mm	mm	mm	mm
Ballasted	3980	1900	2388	2475	2320
Unballasted	3680	1900	2388	2475	2320

2.2 GROUND CLEARANCE

Unballasted tractor: 380 mm
Clearance-limiting part: fuel tank

2.3 TRACTOR MASS

	Ballasted		Unballasted	
	without driver	with driver	without driver	with driver
	kg	kg	kg	kg
Front	1310	1335	1000	1025
Rear	1770	1820	1570	1620
Total	3080	3155	2570	2645

2.4 BALLAST

	Weights		Water
	Number	Total mass	
		kg	kg
Front weight	6	240	none
Rear wheels	4	200	none
Optional	none	none	none
Front support	1	70	none

2.5 TRACK SPECIFICATIONS

None

2.6 TYRES AND TRACK WIDTH SPECIFICATIONS

	Front	Rear
Tyres:		
- make	PIRELLI	PIRELLI
- model	TM 700	TM 700
- dimensions	320/70 R 24	480/70 R 30
- ply rating	-------	------
- load index/speed	116 A8	141 A8
- type	radial	radial
- maximum load (tyre manufacturer's)	12.26 kN	25.26 kN
- inflation pressure (tyre manufacturer's)	160 kPa	160 kPa
- dynamic radius index	515 mm	695 mm
Chosen track width:	1560 mm	1520 mm
Technically permissible axle load:	21.58 kN	34.33 kN

2.7 FUEL

Type: ERG DIESEL oil, in conformity with national standard.
Density at 15 °C: 0.840 g/cm^3

2.8 OILS AND LUBRICANTS

2.8.1 Capacity and change interval

	Capacity	Oil change	Filter change
	dm^3	h	h
Engine with filter	7.5	300	300
Gear box with rear axle, final drive, hydraulic system and steering	42	300	when the warning lamp is lighted
Front axle	4.5	300	none
Front final drive, each (with/without brakes)	1.3	1200 or 2 years	none
Brakes	1.5	max. level	none

2.8.2 Specifications (SAE, API, CCMC, ACEA, Mil.L, ISO)

	Recommended	Used during test
Engine oil - Type: - Viscosity: - Classification:	AKROS TURBO 15 W/40 12.50 cSt API SE - CD	As recommended
Hydraulic fluid - Type: - Viscosity: - Classification	AKROS MULTI 11.50 cSt API GL 4	As recommended
Front and rear axle, final drives and gear box - Type: - Viscosity: - Classification:	AKROS MULTI 11.50 cSt API GL 4	As recommended
Steering oil - Type: - Viscosity: - Classification:	AKROS MULTI 11.50 cSt API GL 4	As recommended
Braking oil - Type: - Viscosity: - Classification:	AKROS MATIC 6.7 cSt API GL4	As recommended

2.8.3 Grease:

Type: AKROS GREASE T2 NLGI2 LITIO/Ca
Number of lubrication points: 10

3 COMPULSORY TESTS

3.1 MAIN POWER TAKE-OFF

Date and location of tests: 8th November 2000, I.M.A., TORINO, ITALY
Type of dynamometer: Parasitic currents, BORGHI&SAVERI FA300-30SP

Power	Speed		Fuel consumption			Specific energy
	Engine	P.t.o.	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/l
3.1.1 MAXIMUM POWER - TWO HOUR TEST						
44.79	2300	565	11.18	13.31	250	3.37
3.1.2 POWER AT RATED ENGINE SPEED						
44.79	2300	565	11.18	13.31	250	3.37
3.1.3 STANDARD POWER TAKE OFF SPEED (540±10 rev/min)						
44.62	2199	540	10.88	12.95	244	3.44
3.1.4 PART LOADS						
3.1.4.1 the torque corresponding to maximum power at rated engine speed						
44.79	2300	565	11.18	13.31	250	3.37
3.1.4.2 85% of torque obtained in 3.1.4.1						
40.51	2431	597	10.69	12.73	264	3.18
3.1.4.3 75% of torque defined in 3.1.4.2						
30.78	2447	601	8.62	10.26	280	3.00
3.1.4.4 50% of torque defined in 3.1.4.2						
20.70	2492	612	6.71	7.99	324	2.59
3.1.4.5 25% of torque defined in 3.1.4.2						
10.46	2496	613	4.75	5.65	454	1.85
3.1.4.6 unloaded						
-	2512	617	3.06	3.64	-	-

Power	Speed		Fuel consumption			Specific energy
	Engine	P.t.o.	Hourly		Specific	
kW	rev/min		kg/h	l/h	g/kWh	kWh/l
3.1.5 PART LOADS AT STANDARD POWER TAKE OFF SPEED (540±10 rev/min)						
3.1.5.1 the torque corresponding to maximum power						
44.62	2199	540	10.88	12.95	244	3.44
3.1.5.2 85% of torque obtained in 3.1.5.1						
39.86	2292	563	10.04	11.95	252	3.33
3.1.5.3 75% of torque defined in 3.1.5.2						
30.43	2329	572	8.21	9.77	270	3.11
3.1.5.4 50% of torque defined in 3.1.5.2						
21.03	2370	582	6.37	7.58	303	2.77
3.1.5.5 25% of torque defined in 3.1.5.2						
10.62	2386	586	4.61	5.49	434	1.93
3.1.5.6 unloaded						
-	2414	593	2.84	3.38	-	-

No load maximum engine speed: 2512 rev/min

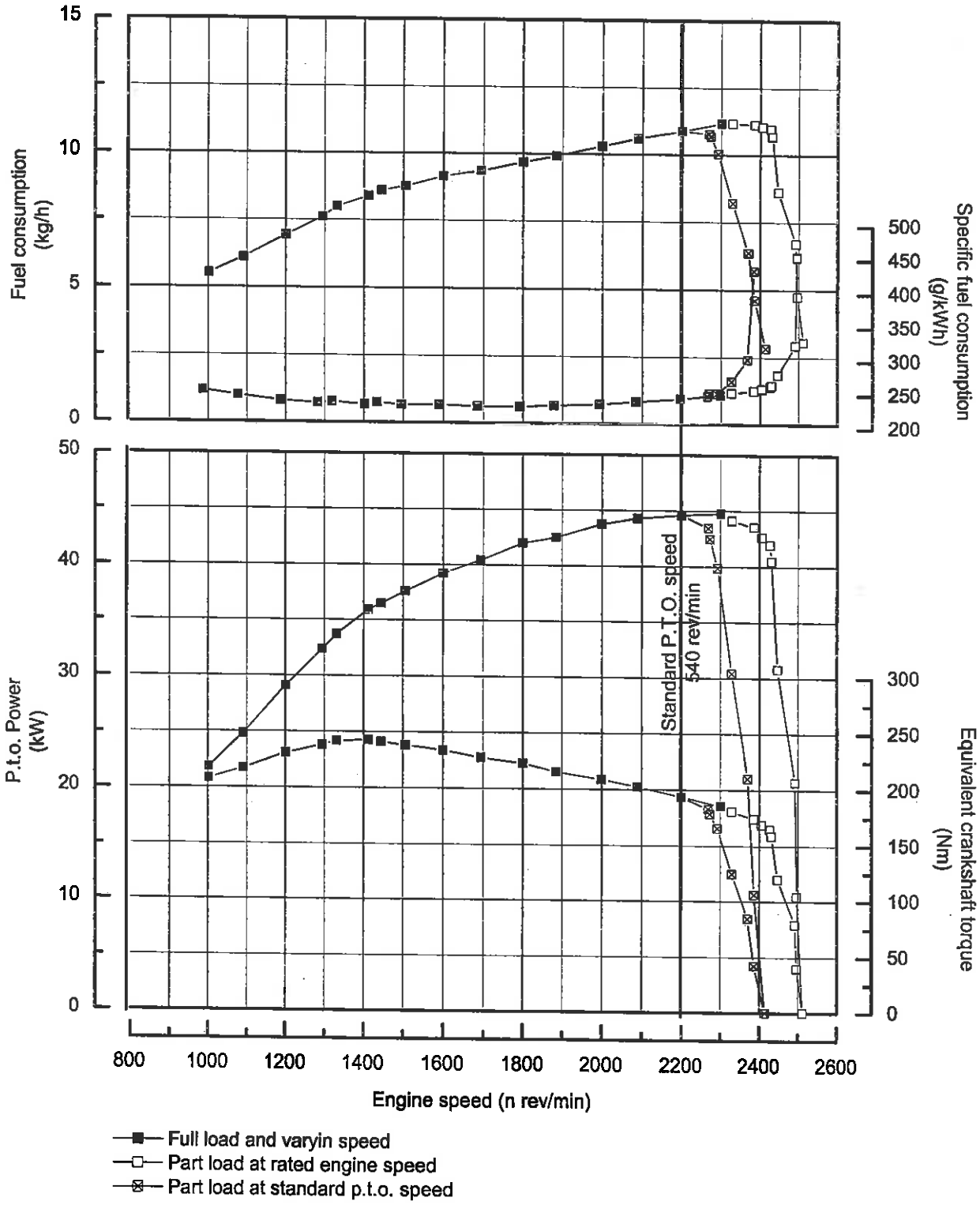
Torque (equivalent crankshaft) at maximum power:

- at rated engine: 185.93 Nm
- at standard power take-off speed: 193.79 Nm

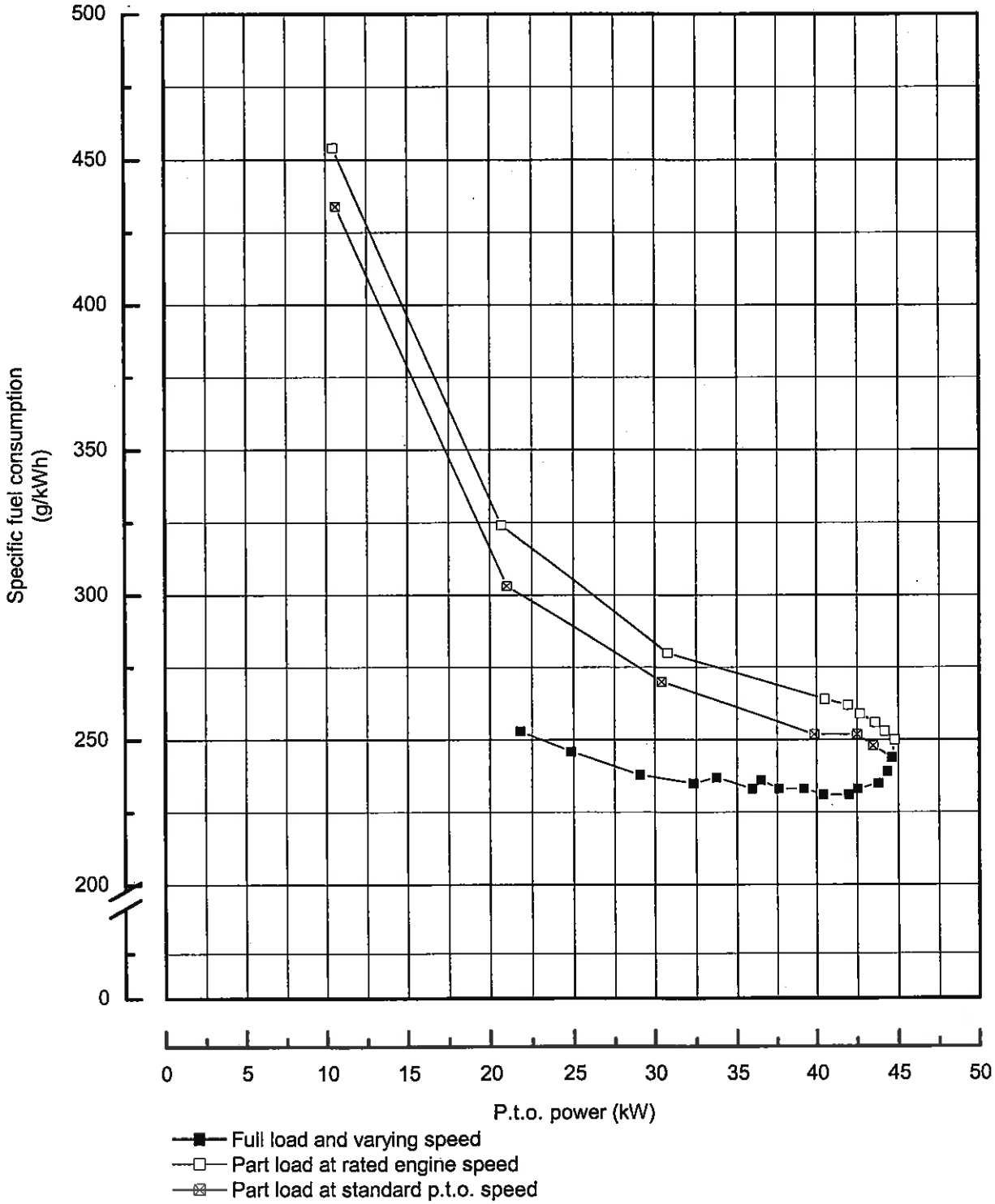
Maximum torque (equivalent crankshaft): 242.91 Nm at 1413 rev/min of the engine

Mean atmospheric conditions	
Temperature	24.5 °C
Pressure	97.4kPa
Relative humidity	60%
Maximum temperature	
Coolant	82.5 °C
Engine oil	106.5 °C
Fuel	34.5°C
Engine air intake	25.5°C

Graph 1. Power take-off test



Graph 2. Power take-off test



3.2 HYDRAULIC POWER AND LIFTING FORCE

Results are extracted from New Holland TN 75 D tractor previously tested and approved on 25th April 2000 by the OECD Co-ordinating Centre with No. 1/1 897. Hydraulic lift components and test conditions are identical.

Date of tests: 1st July 1999

3.2.1 Hydraulic Power Test

Sustained pressure with relief valve open: 20.8 MPa
Pump stalled: no
Pump delivery rate at minimum pressure: 64.9 l/min

	Flow rate	Pressure	Power
	l/min	MPa	kW
Flow rate corresponding to a hydraulic pressure equivalent to 90% of the actual relief valve pressure setting and corresponding hydraulic power	25.1	18.7	7.8
Flow rate and hydraulic pressure corresponding to maximum hydraulic power	55.0	16.6	15.2

Tapping point used for test: at rear of tractor
Temperature of hydraulic fluid: 65 °C
Opening pressure of the unloading valve: not applicable
Closing pressure of the unloading valve: not applicable

3.2.2 Power lift test

3.2.2.1 Rear power lift

Rear power lift linkage settings for test - see Table 1 and Figure 1

	at the hitch point	on the frame
Height of lower hitch points above ground in down position	200 mm	200 mm
Vertical movement		
- with lifting force	570 mm	570 mm
- without lifting force	600 mm	600 mm
Maximum corrected force exerted through full range	19.60 kN	18.01 kN
Corresponding pressure of hydraulic fluid	18.7 MPa	18.7 MPa
Moment about rear-wheel axis	20.28 kNm	29.62 kNm
Maximum tilt angle of mast from the vertical	none	1 degrees

Lifting heights relative to the horizontal plane including the lower pivot points								
mm	-305	-250	-200	-100	0	100	200	265
Lifting forces								
at the hitch points kN	28.25	27.06	26.79	25.77	25.37	23.25	22.11	19.60
Corresponding pressure: 18.7MPa								
at the frame kN	20.99	21.70	22.48	23.24	23.80	23.50	23.59	18.01
Corresponding pressure: 18.7 MPa								

3.3 DRAWBAR POWER TEST (ballasted and unballasted tractor)

Date of tests: 27th November- 1st December 2000
Type of track: Asphalt

	Height of hitch above ground	Tyre inflation pressure	
		Front	Rear
Unballasted	465 mm	145 kPa	98 kPa
Ballasted	460 mm	145 kPa	98 kPa

Gear and range	Power	Drawbar pull	Speed	Engine speed	Slip of wheels	Specific fuel consumption	Specific energy	Temperature			Atmospheric conditions		
								Fuel	Coolant	Engine oil	Temperature	Relative humidity	Pressure
	kW	kN	km/h	min^{-1}	%	g/kWh	kWh/l	°C	°C	°C	°C	%	kPa
3.3.1 MAXIMUN POWER IN TESTED GEARS (unballasted tractor)													
1 Slow	16.3	27.9	2.10	2410	15.4	657	1.28	15	81	105	5	85	98.5
2 Slow	24.0	27.9	3.10	2402	15.9	450	1.87	17	82	107	5	80	98.5
3 Slow	34.3	27.4	4.51	2353	15.1	326	2.58	18	81	109	7	75	98.5
4 Slow	37.7	18.6	7.30	2300	5.1	297	2.83	21	80	111	7	70	98.5
1 Fast	36.4	14.7	8.92	2300	3.8	306	2.75	20	80	113	8	65	98.5
2 Fast	36.8	9.8	13.52	2300	2.2	309	2.72	21	81	112	8	60	98.5
3.3.2 MAXIMUN POWER IN TESTED GEARS (ballasted tractor)													
1 Slow	19.0	32.8	2.08	2382	15.2	573	1.47	20	81	117	9	60	98.5
2 Slow	28.4	32.8	3.12	2362	14.0*	385	2.18	16	80	120	9	65	98.5
3 Slow	37.4	28.2	4.77	2300	8.1	296	2.84	21	81	126	7	70	98.5
4 Slow	38.4	18.8	7.36	2300	4.3	292	2.88	22	81	125	7	75	98.5
1 Fast	37.1	14.8	9.02	2300	2.8	301	2.79	23	80	125	6	80	98.5
2 Fast	36.3	9.7	13.46	2300	2.7	308	2.73	23	81	126	6	85	98.5
3.3.3 FIVE HOURS TESTS													
3.3.3.1 FIVE HOUR TEST at 75% of pull at maximum power at rated speed													
4 Slow	30.2	14.1	7.71	2382	3.1	358	2,35	24	81	125	4	85	98.1
3.3.3.2 FIVE HOUR TEST at pull corresponding to 15% wheelslip, with 300 kg as additional ballast													
2 Slow	29.5	32.7	3.25	2333	⌘	⌘	2.25	23	81	115	6	75	98.1

⌘ The test was carried out with additional ballast; the not quoted figures are irrelevant
* Not possible to achieve steady condition on 15% slip.

Oil consumption during ten hours duration of test 3.3.3.1and 3.3.3.2: 7.5 g/h

3.4 TURNING AREA AND TURNING CIRCLE

Wheels equipment:
- front: 320/70 R 24
- rear: 480/70 R 30

Track width:
- front: 1560 mm
- rear: 1520 mm

	With brakes		Without brakes	
	Right-hand	Left-hand	Right-hand	Left-hand
	m	m	m	m
Radius of turning area:	3.70	3.70	4.30	4.30
Radius of turning circle:	3.55	3.55	4.15	4.15

3.5 LOCATION OF CENTRE OF GRAVITY

Height above ground:	750 mm
Distance forward from the vertical plane, containing the axis of the rear wheels:	805 mm
Distance from the median plane of the tractor: to the left:	5 mm

3.6 BRAKING

Date of tests: 7th November 2000
Type of track: asphalt
Type of decelerometer: Peiseler wheel

3.6.1 Cold service braking device test

Unballasted tractor		
Speed before application of brake	Braking device control force	Mean deceleration
km/h	kN	m/s^2
31.0	0.09	2.0
31.8	0.15	2.3
31.9	0.23	2.5
31.9	0.32	3.3
32.0	0.37	3.4
32.0	0.42	4.4

Ballasted tractor		
Speed before application of brake	Braking device control force	Mean deceleration
km/h	kN	m/s^2
32.0	0.18	2.7
32.0	0.24	3.2
32.0	0.30	4.4
31.9	0.35	4.5
32.1	0.39	5.5
32.0	0.52	6.2

Maximum deviation of the tractor from its original course: none
Abnormal vibrations: none

3.6.2 Fade test

Speed before application of brake	Braking device control force	Mean deceleration
km/h	kN	m/s^2
32.0	0.14	2.5
32.0	0.21	3.0
32.0	0.30	3.8
32.0	0.35	4.1
32.0	0.40	4.8
32.0	0.45	4.9

Maximum deviation of the tractor from its original course: none
Abnormal vibration: none
Brake heating method: by means of towing the tractor for 1 km at 25 km/h with a towing force of 3.3 kN

3.6.3 Parking braking device test

	Uphill	Downhill
Braking device control force	0.21 kN	0.21 kN

3.7 MEASUREMENT OF EXTERNAL NOISE LEVEL

Date of tests: 7th November 2000 - I.M.A. - TORINO
Sound level meter make, model and type: RION make, NA 29 E model, impulse precision type
Type of track: asphalt
Gear number: 4 Fast
Travelling speed before acceleration: 23 km/h
Sound level: 85.0 dB(A) (on the left side)
84.3 dB(A) (on the right side)

4 OPTIONAL TESTS RESULTS

none

5 REPAIRS

none

6 REMARKS

Tests have been carried out on tractor with 8 forward and 8 reverse speeds, fitted with 2 posts rear non folding roll-bar and normal steer but the NEW HOLLAND TN 70 D 4WD tractors are manufactured in other variants as following described:

- For the transmission:
  1. with 16 forward and 16 reverse speeds; 4 speeds, 4 ranges of speed (slow, medium slow, medium fast and fast) and 1 reverse group
  2. with 28 forward and 16 reverse speed: 4 speeds, 1 reduction group (creeper and normal), 3 ranges of speed (slow, medium slow and medium fast) for creeper group and 4 ranges (slow, medium slow, medium fast and fast) for normal group, and 1 reverse group
  3. with 32 forward and 16 reverse speed: 4 speeds, 4 ranges of speed (slow, medium slow, medium fast and fast), 1 HI-LO reduction group, and 1 reverse group
  4. with 44 forward and 16 reverse speed: 4 speeds, 1 reduction group (creeper, splitter and normal), 3 ranges of speed (slow, medium slow and medium fast) for creeper group and 4 ranges (slow, medium slow, medium fast and fast) for splitter and normal group, and 1 reverse group
  5. with 44 forward and 16 reverse speed: 4 speeds, 2 reduction group (creeper and HI-LO), 3 ranges of speed (slow, medium slow and medium fast) for creeper group and 4 ranges (slow, medium slow, medium fast and fast) for HI-LO group, and 1 reverse group

- For the protective structure fitted on the tractor
  1. 2 posts rear folding roll bar
  2. cab

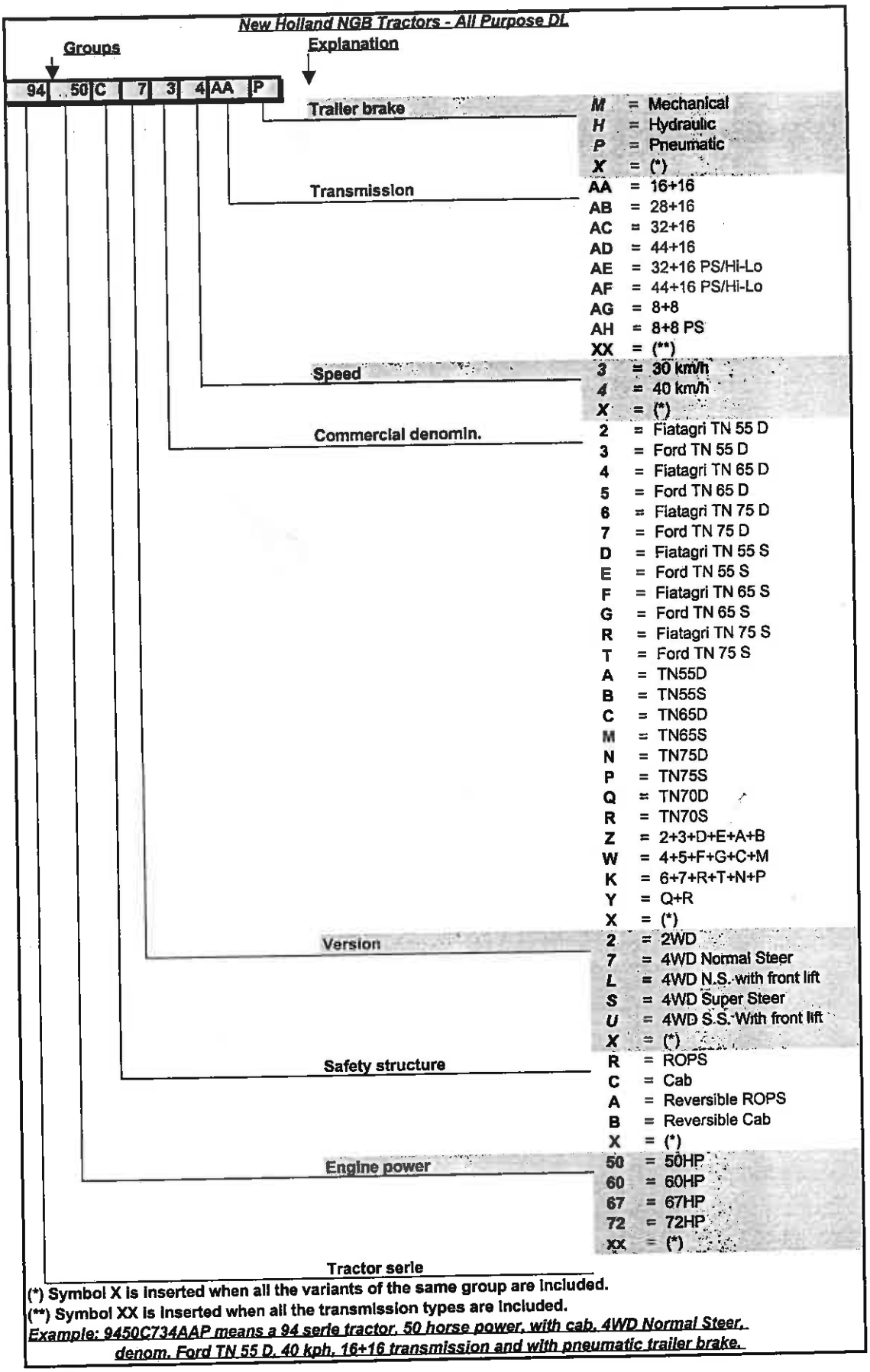
- For the steering mechanism fitted on the tractor
  1. super steer

The tractor can be fitted with other tyres as listed in the table below

Front	Rear
11.2R20 (111A8)	14.9R28 (128A8)
8.3R24 (104A8)	12.4R32 (122A8)
360/70R20 (120A8)	420/70R30 (134A8)
11.2R24 (114A8)	12.4R36 (124A8)
11.2R24 (114A8)	16.9R30 (137A8)
300/70R24 (111A8)	480/70R28 (140A8)
300/70R20 (110A8)	380/70R28 (127A8)
320/70R20 (113A8)	420/70R28 (133A8)
335/80R18 (151A2)	480/65R28 (129A8)
375/75R20 (155A2)	540/65R28 (137A8)
340/75R20 (117A8)	16.9R28 (136A8)
8.3R24 (104A8)	9.5R36 (114A8)
405/70R20 (155A2)	540/65R30 (138A8)
14.9LR20 (119 A8)	16.9R30 (137A8)

7 ANNEX

Manufacturer's tractor denominations



The Head of the Section

E. CAVALLO

The Director

M. GIOCO

Torino, 16th January 2001