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

Report No. 2180/T/1997

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

TRACTORS: Make: **NEW HOLLAND ITALIA**

Models: **FIAT L 75DT** Approval number: **1656/1**
with 24 x 12 HI-LO Transmission (30 km/h version)

Models: **FORD 5635DT** Approval number: **1656/2**
with 24 x 12 HI-LO Transmission (30 km/h version)

Type: 4 WD



Manufactured by: NEW HOLLAND ITALIA S.p.A. - MODENA (Italy)

Date and location of the tests: September 1996 ÷ January 1997 - TORINO (Italy)

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

Date of approval: 17th April 1997

PRELIMINARY REMARK

The NEW HOLLAND ITALIA FIAT L75DT (4 WD) and the NEW HOLLAND ITALIA FORD 5635DT (4 WD) tractors are technically identical in all main respects, except with regard to the following items:

- model designation;
- colour;

Therefore, tests have not been repeated, and approval number is valid for both tractor models.
All tests were carried out on the NEW HOLLAND ITALIA FIAT L75DT (4 WD) tractor equipped with safety cab.

This bulletin is based on engineering tests in accordance with O.E.C.D. Full Code (Code I).
It does not contain an evaluation of performance of the tractor on practical farm work.

The NEW HOLLAND ITALIA FIAT L75DT (4 WD) and the NEW HOLLAND ITALIA FORD 5635DT (4 WD) tractors are manufactured in following variants:

1. with 12 x 12 Mechanical Transmission (30 km/h version) - (4x3 gear units and one reverse group) and equipped with safety cab;

2. with 12 x 12 Mechanical Transmission (30 km/h version) - (4x3 gear units and one reverse group) and equipped with 2 post safety frame folding or not folding;

3. with 12 x 4 Mechanical Transmission (30 km/h version) - (4x3 forward gear units and 4x1 rear gear units) and equipped with safety cab;

4. with 12 x 4 Mechanical Transmission (30 km/h version) - (4x3 forward gear units and 4x1 rear gear units) and equipped with 2 post safety frame folding or not folding;

5. with 20 x 12 Mechanical Transmission (30 km/h version) - (4x3 gear units and one reverse group plus 4x2 gear units responsible of the 8 forward creeper gears) and equipped with safety cab; when the reverse group is engaged the 8 creeper gears are automatically forbidden reducing to 12 the number of reverse speeds;

6. with 20 x 12 Mechanical Transmission (30 km/h version) - (4x3 gear units and one reverse group plus 4x2 gear units responsible of the 8 forward creeper gears) and equipped with 2 post safety frame folding or not folding; when the reverse group is engaged the 8 creeper gears are automatically forbidden reducing to 12 the number of reverse speeds;

7. with 24 x 12 HI-LO Transmission (30 km/h version) - (4x3 gear units plus one reduction gear HI-LO and one reverse group) and equipped with safety cab; when the reverse group is engaged the position HI is automatically forbidden reducing to 12 the number of reverse speeds;

8. with 24 x 12 HI-LO Transmission (30 km/h version) - (4x3 gear units plus one reduction gear HI-LO and one reverse group) and equipped with 2 post safety frame folding or not folding; when the reverse group is engaged the position HI is automatically forbidden reducing to 12 the number of reverse speeds;

Tests have been carried out on tractor with the seventh variant.

In this report all performance characteristics are given corresponding to the International System of Units.

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Compulsory main power take-off test	
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Curves of specific fuel consumption/crankshaft power p.t.o.	2

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

1 SPECIFICATIONS OF TRACTOR

1.1 IDENTIFICATION

- Make/Model/Type:	NEW HOLLAND ITALIA, FIAT L75DT (4WD), wheeled tractor, unit construction, all wheels drive tractors
- Number of driving wheels:	4
- Serial N°:	001044840
- 1st serial N°:	001044840

1.2 ENGINE

- Make/Model/Type:	NEW HOLLAND ITALIA, FIAT 8045.05R (*), water cooled, 4 stroke, Diesel engine, direct injection, naturally aspirated
- Serial N°:	822049

1.2.1 Cylinders

- Number/disposition:	4, vertical, in-line
- Bore/stroke:	104 x 115 mm
- Capacity:	3908 cm^3
- Compression ratio:	17 : 1
- Arrangement of valves:	overhead
- Cylinder liners:	dry

1.2.2 Supercharging

- Make/Model/Type:	none
- Pressure:	---

(*) The engine manufacturer is going to change the model denomination of the engine from FIAT 8045.05R to IVECO 8045.05R maintaining the same technical characteristics and test performances

1.2.3 Fuel system

- Fuel feed system:	AC CORONA fuel feed pump
- Make/Model/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:	115 dm^3 on the left side under the protective structure
- Make/Model/Type of injection pump:	BOSCH VE4/11 F 1250 L 613-1, rotary injection pump (as option, BOSCH VE4/11 F 1250 LV13765, rotary injection pump)
- Serial N°:	none
- Manufacturer's production setting of injection pump:	
- flow rate:	49.8 mm^3/stroke at rated speed and full load corresponding 14.96 dm^3/h (50±1 mm^3/stroke given by the manufacturer)
- timing:	4.0°±1° before TDC
- Make/Model/Type of injectors:	BOSCH DLLA 136 S multihole injection nozzles used with engine equipped with BOSCH VEL 613, rotary injection pump (as option BOSCH DLLA 132 S multihole injection nozzles used with engine equipped with BOSCH VE4/11 F 1250 LV13765, rotary injection pump and STANADYNE DLL 136 S multihole injection nozzles used with engine equipped with BOSCH VEL 613, rotary injection pump)
- Injection pressure:	22.6 ± 1 Mpa for BOSCH DLLA 136 S and STANADYNE DLL 136 S multihole injection nozzles and 26.0 ± 1 Mpa for BOSCH DLLA 132 S multihole injection nozzles (*)
- Make/Model/Type of carburettor:	none

1.2.4 Governor

- Make/Model/Type:	BOSCH make, centrifugal variable speed governor,mechanical type, incorporated in the fuel injection pump
- Governed range of engine speed:	from 750 to 2745 rev/min
- Rated engine speed:	2500 rev/min

1.2.5 Air cleaner

- Pre-cleaner:	none
• Make/Model/Type:	---
• Location of air intake:	---

(*) Although the injection pressure of the available injectors is different, the performances of the engine - tested according to the 80/1269/EEC, 88/195/EEC and 89/491/EEC - change within the tollerance given by these EEC Directives

- Main cleaner:	
• Make/Model/Type:	DONALDSON make, NEW HOLLAND ITALIA drawing n. 5157064, dry paper element filter with two replaceable cartridge elements; DONALDSON make, 1930588 type for the internal one and 1930587 type for the external one (as option DONALDSON make, NEW HOLLAND ITALIA drawing n. 5165665, dry paper element filter with two replaceable cartridge elements;)
• 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
- Type of pump:	impeller pump
- Specification of fan:	propeller fan driven by engine shaft
- Number of fan blades:	4
- Fan diameter:	450 mm
- Coolant capacity:	16 dm^3 (14 dm^3 for the tractor equipped with the safety frame)
- Type of temperature control:	a temperature gauge, with display on the dashboard, alerts the operator to potential problems
- Superpressure system:	radiator cap

1.2.8 Starting system

- Make/Model/Type:	BOSCH, 4807375, electromagnetic engagement (as option, MAGNETI MARELLI, 4755109, electromagnetic engagement)
- Starter motor power rating:	3.5 kW for both type
- Cold starting aid:	LUCAS make, thermostart model with variable resistance (as option, "start-pilot" device)
- Safety device:	tractor doesn't start unless the clutch pedal is depressed

1.2.9 Electrical system

- Voltage:	12 V, negative earth
- Generator:	
• Make/Model/Type:	MAGNETI MARELLI, AA 125E, 12 V 65A, Alternator for the tractor equipped with the safety cab and MAGNETI MARELLI, AA 125E, 12 V 45A, Alternator for the tractor equipped with the safety frame
• Power:	780 W for the tractor equipped with the safety cab and 540 W for the tractor equipped with the safety frame
- Battery:	1 lead acid type

• Rating:	100 Ah at 20 hours or as option 132 Ah at 20 hours

1.2.10 Exhaust system

- Make/Model/Type:	NEW HOLLAND ITALIA, drawing n. 5169710, DGM SA 3757, interference type with internal perforated pipe (as option, NEW HOLLAND ITALIA, drawing n. 5167695, DGM SA 3758, interference type with internal perforated pipe and an air displacement device)
- Location:	on the left hand side of engine, under the bonnet cowling, with the vertical exhaust pipe above the bonnet cowling

1.3 TRANSMISSION

1.3.1 Clutch

- Make/Model/Type:	LUK, drawing n. 5179849, dual disk dry clutch, one for travelling and one for PTO engagement; the two discs are composed respectively by cerametallic material - travelling disc - and organic material - PTO disc.
- Number of plates:	2
- Diameter of plates	305 mm
- Method of operation:	Mechanically operated by pedal, for travelling and by lever, for PTO engagement.

As option:

- Make/Model/Type:	LUK, drawing n. 5179832, independent single disc dry clutch, used only for travelling, composed by cerametallic material and one independent multiplate wet discs, used for PTO engagement composed by organic material.
- Number of plates:	1 for clutch used for travelling and 5 for clutch used for PTO engagement
- Diameter of plates	127 mm
- Method of operation:	Mechanically operated by pedal, for travelling and hydraulically operated by button, for PTO engagement.

1.3.2 Gearbox

- Make/Model/Type:	Own make, drawing n. 5170536, mechanical syncromesh speed change gears, fitted on the tested tractor
- Arrangement:	four speeds forward with three ranges, one reduction gear (HI-LO) and one reverse group; when the reverse group is engaged the position HI is automatically forbidden reducing to 12 the number of reverse speeds.
- Number of gears:	24 forward and 12 reverse
- Available options:	
- Make/Model/Type:	Own make, drawing n. 5170520, mechanical syncromesh speed change gears.
• Arrangement:	four speeds forward with three ranges and one reverse group;
• Number of gears:	12 forward and 12 reverse

- Trailer braking take-off: hydraulic or pneumatic traler braking systems

1.11.2 Parking brake:

- Type: fully independent of service brake, 4 oil bath sectors, mounted on the secondary shaft of the gear box, FRENDO ABEX 40 A lining material
- Method of operation: mechanical by hand lever

1.12 WHEELS

Steering wheels

- Number: 2
- Location: at front

Driving wheels

- Number: 4
- Location: 2 at front and 2 at rear

- Wheelbase: 2314 mm

- Track width adjustment:

	Minimum mm	Maximum mm	Adjustment method
Front	1300	2115	Changing the position of the rims with respect to the disc
Rear	1440	2205	Changing the position of the rims in respect to the disc

1.13 PROTECTIVE STRUCTURE

- Make/Model/Type: NEW HOLLAND make, SLTV 3 model, not tiltable cab type
- Manufacture's name and address: NEW HOLLAND ITALIA S.p.A., Viale delle Nazioni, 55 41100 MODENA (MO) - Italy
- Protective device: cab, not tiltable
- OECD approval number: CSD 1404/5 for the FIAT version and CSD 1404/15 for the FORD version
- Date of approval: 9th October 1995

As option:

- Make/Model/Type: NEW HOLLAND make, 35/L/1 model, not tiltable Rear Roll Bar type
- Manufacture's name and address: NEW HOLLAND ITALIA S.p.A., Viale delle Nazioni, 55 41100 MODENA (MO) - Italy
- Protective device: Rear Roll Bar, not tiltable
- OECD approval number: CSS 0349/5 for the FIAT version and CSS 0349/15 for the FORD version
- Date of approval: 9th October 1995

- Make/Model/Type:	NEW HOLLAND make, 35/L/A model, folding Rear Roll Bar type
- Manufacture's name and address:	NEW HOLLAND ITALIA S.p.A., Viale delle Nazioni, 55 41100 MODENA (MO) - Italy
- Protective device:	Rear Roll Bar, folding
- OECD approval number:	CSD 1406/5 for the FIAT version and CSD 1406/15 for the FORD version
- Date of approval:	9th October 1995
- Make/Model/Type:	NEW HOLLAND make, 35/L/B model, NON folding Rear Roll Bar type
- Manufacture's name and address:	NEW HOLLAND ITALIA S.p.A., Viale delle Nazioni, 55 41100 MODENA (MO) - Italy
- Protective device:	Rear Roll Bar, NON folding
- OECD approval number:	CSD 1406/25 for the FIAT version and CSD 1406/35 for the FORD version
- Date of approval:	9th October 1995
- Make/Model/Type:	NEW HOLLAND make, 35/L/3 model, not tiltable Rear Roll Bar type
- Manufacture's name and address:	NEW HOLLAND ITALIA S.p.A., Viale delle Nazioni, 55 41100 MODENA (MO) - Italy
- Protective device:	Rear Roll Bar, not tiltable
- OECD approval number:	CSD 1412/45÷46 for the FIAT version and CSD 1412/65÷66 for the FORD version
- Date of approval:	12TH February 1997
- Make/Model/Type:	NEW HOLLAND make, 35/L/C model, folding Rear Roll Bar type
- Manufacture's name and address:	NEW HOLLAND ITALIA S.p.A., Viale delle Nazioni, 55 41100 MODENA (MO) - Italy
- Protective device:	Rear Roll Bar, folding
- OECD approval number:	CSD 1411/49÷50 for the FIAT version and CSD 1411/69÷70 for the FORD version
- Date of approval:	12TH February 1997
- Make/Model/Type:	NEW HOLLAND make, 35/L/D model, NON folding Rear Roll Bar type
- Manufacture's name and address:	NEW HOLLAND ITALIA S.p.A., Viale delle Nazioni, 55 41100 MODENA (MO) - Italy
- Protective device:	Rear Roll Bar, NON folding
- OECD approval number:	CSD 1411/129÷130 for the FIAT version and CSD 1411/149÷150 for the FORD version
- Date of approval:	12TH February 1997

1.14 SEAT

1.14.1 Driver's seat

- Make/Model/Type:	GRAMMER make, DS 85H/3A model, upholstered seat with back rest, is mounted on tractor equipped with safety cab
- Type of suspension:	adjustable spring