

F170_B VHP



HORSEPOWER (TIER3)	220 HP (164 kW)
BASE OPERATING WEIGHT	15,517 kg
MAXIMUM OPERATIONAL WEIGHT	17,642 kg



BUILT AROUND YOU

F170B

The global strength of New Holland is in the technology, efficiency, and high quality of its machines.
The local solutions that New Holland brings to the segments in which it operates consolidate the excellence of its brand in the world market of construction.

The F170B motor grader

is a machine that stands out for its high technology and efficiency with high precision hydraulic controls, chassis articulation in front of the cab, Roll Away central blade with an involute profile, and intelligent electronic control transmission.

Its design is functional and modern.

The cab and rear hood have rounded lines and a cool style that combines harmony and stability, providing easy access to routine maintenance items.

The F170B equipment

has an international quality standard that is recognized by the high productivity and assurance of New Holland's global strength.





POWERTRAIN

New Holland designed the power train of the **F170B motor grader** to overcome the harshest strains, because the activities of earthmoving require robust machines with high power and a high traction capacity. This set, perfectly integrated, offers great resistance, more durability, and especially a high working capacity.

The engine of the F170B is the FPT NEF 6.7 I, which is recognised worldwide for its outstanding performance and ease of maintenance. This engine has proven efficiency and durability and TIER 3 certification.

The Bosch Common Rail fuel injection and the double fuel filter with an integrated water separator make up an efficient, sensitive, and durable injection system.





POWERSHIFT TRANSMISSION

The F170B motor grader has a Powershift type automatic transmission of electronic control, coupled to the engine through a torque converter system equipped with Lock-Up. The Lock-Up allows the locking of the torque converter, transforming the transmission into a Direct Drive system.

This way, the F170B motor grader combines the advantages of the torque converter, which is ideal for operations that require high traction forces such as cutting on hard surfaces and heavy ripping with the advantages of direct coupling, which is ideal for operations that require a constant speed and fixed control of displacement such as finishing operations and precision levelling. All of this is in a single equipment. The Lock-Up operation is performed by simply flipping a switch located on the side console.

The gearbox has two operation modes. The automatic mode applies the gear most appropriate to the activity that the machine is carrying out, taking into account the acceleration, travel speed, and effort. Therefore, the operator can concentrate more on his work without worrying about shifting gears.

The operator can change the transmission control to manual by flipping a switch on the side console in case he prefers it. In this case, the gear selection is done through a bump shifter without the use of channels for gear or direction. The operation is very simple and the machine follows the operator's commands.

TRANSMISSION CONTROL UNIT (TCU) AN ELECTRONIC PROCESSOR TO ENSURE PRECISION IN THE OPERATIONS.

The TCU electronic processor manages all of the information during the transmission operation with greater precision in all of the operation phases, providing to the set an optimised operation and ensuring increased productivity, useful life, and comfort to the operator.

The TCU ensures the equipment's integrity while avoiding wrong or abusive operations such as shifting gears and direction inversions at inappropriate speeds.

The transmission also has a failure diagnosis system that warns of any problems that are occurring with the set on the panel or by connecting a laptop. High durability with simplified mechanics and extremely easy maintenance, this transmission offers high reliability and unparalleled performance.



“GO HOME”

This device automatically detects failures that may limit or prevent the proper operation of the TCU. **Go Home** allows only one gear to be engaged in each direction and within the appropriate speed limit for that gear. This device is important because it allows the machine to be transported until the workshop, avoiding it from staying in an inadequate location.

AXLES

The F170B motor grader axles were made to ensure greater robustness and ability to transfer power to the ground. The front axle is made of a welded steel structure with highly resistant cast parts, offering a wide and constant ground clearance of 580 mm throughout its entire length due to its straight geometry. The lateral tilt of the wheels of 15.3° to the right or left and the oscillation of 20° degrees to each side allow the land irregularities to be followed.

The rear axle is made of cast iron and the tandem structure is made of a rectangular profile welded on to steel plates. Both were designed to withstand the harshest conditions. It is equipped with the Diff Lock differential system activated by a switch on the operator console. The tandem oscillation is 20 degrees to each side.

BRAKES

The F170B has two circuits in its brake system, one for each tandem. The brakes are of the multiple discs, oil bath, auto-adjustable type with a long usable life.

The servo assisted hydraulic service brakes have two nitrogen accumulators, one for each circuit. These accumulators allow the operator to still stop the machine in case there is some failure in the hydraulic system or the engine dies.

STEERING / ARTICULATION

Orbitrol type hydrostatic steering fed by a gear pump. The front wheel steering angle is of 42 degrees on both sides and the chassis articulation is 25 degrees to the right or left, providing a turning radius of 7,250 mm.

This reduced turning radius allows the operator to carry out jobs in confined areas with greater ease and perform operations in sharp turns in less time. An auxiliary handle on the steering wheel allows greater flexibility in performing manoeuvres.

HYDRAULIC SYSTEM

The hydraulic system is of the Load and Flow Sensing type (load sensitive). Therefore the pump only provides flow when the operator activates one of the control levers. When there is no hydraulic demand, the pump consumes a minimum power of the engine and the hydraulic system works more cooled, which reduces fuel consumption.

The F170B grader is also equipped with a closed-centre hydraulic distributor with nine sections of circuits, situated in a protected location and below the operator platform. This way it is possible to assemble new accessories without the need to add hydraulic sections to the distributor.





ELECTRICAL SYSTEM

The electrical system is 24 volts and powered by two maintenance-free batteries of 12 volts each connected in series with a total capacity of 100 Ah and located in an easy access place.

The F170B has a set of lights in front, in the back, and on the blade providing perfect illumination of the workplace.

OPERATOR COMPARTMENT - CAB OPTIONS

Closed or open, the cabs are assembled on the rear chassis, which makes it easier for the operator to perform manoeuvres in reverse and check exactly how much the chassis is being articulated. This means total safety in the operations.

CLOSED CAB ROPS/FOPS

The closed cab is high and has 6.76 m² of area closed with glass. Its design with all the flat faces and a lower rear hood ensure greater visibility, enabling a better visual control for both rear jobs such as ripper as well as front jobs with a blade or scarifiers.

- safety glass
- general switch inside the compartment
- front windshield wiper with washer
- inside light
- an inside rear-view mirror and two outside ones
- provision for radio with speaker
- 12 volt power outlet
- access from both sides
- inside ventilation system with deflectors on the ceiling for better cooling
- cupholders
- adjustable steering column
- optional: air-conditioning, heater, rear windshield wiper and rear sunshade curtain



OPEN CAB ROPS/FOPS

This type of cab offers far more protection and comfort in comparison to the canopy since it protects the operator from the dust of the machines that are ahead and low volume rains.

- front and rear glasses
- front windshield wiper with washer
- fan
- an inside rear-view mirror and two outside ones
- inside light
- general switch inside the compartment
- access from both sides
- ceiling fan
- adjustable steering column



TOTAL COMFORT FOR THE OPERATOR

There are several items that the FI70B grader offers for the comfort of the operator: adjustable seat with arm and head rest and elastic suspension with regulation for the weight of the operator.

The steering console is fully adjustable to the working position for operators of any height. The steering wheel has an auxiliary handle that is optional for handling with one hand while the other hand takes care of the attachment. Shorter levers allow you to control all the attachments easily and productively.

CONTROLS, MONITOR, AND PANEL

The ergonomics of the FI70B grader positioned all the controls and buttons within the reach of the operator. The Electronic Data Monitor (EDM) monitors all of the vital functions of the equipment, enabling the operator to obtain reliable information on the operation of the machine.

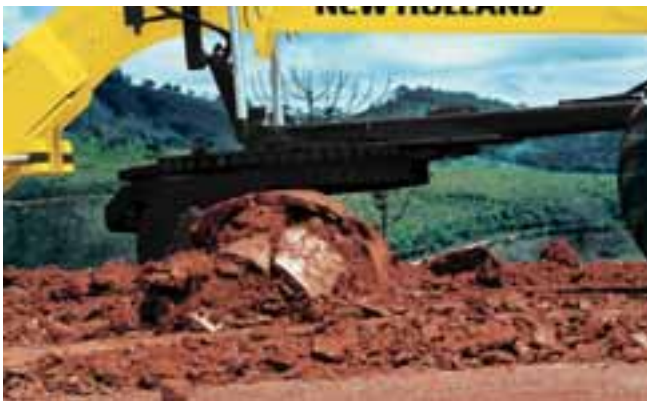
The side panel has liquid crystal analogue displays that are easy to read such as the fuel level, temperatures, and motor oil and transmission pressures.





MORE OPTIONS FOR MORE VERSATILITY

The FI70B grader offers a range of options to facilitate the job and increase productivity such as floating of the front and central blades, rear hook, reinforced blade corners, blade length, front push plate, spare wheel holder, and other items already known and accepted on the market.



CENTRAL BLADE WITH ROLL AWAY INVOLUTE PROFILE

The FI70B central blade has a Roll Away involute profile, which causes the material to roll, makes the job easier and reduces stress on the machine, generating higher productivity and lower fuel consumption.

As standard equipment, the motor grader has the side displacement and tilt of the blade hydraulically activated, which are indispensable items in various types of work. The locking system of the saddle, which operates through a hydraulic cylinder controlled by a solenoid valve can be activated by a switch located on panel.

ROBUST CONSTRUCTION

The blade is built of steel highly resistance to abrasion and has knives and boron steel corners, which has a longer useful life. The circle of the blade is supported on guides with replaceable phenolic resin inserts, which do not require lubrication. Its external teeth avoid damages to the rotating pinion in cases of operation with inadequate clearance adjustment due to maintenance failures. The blade can make a 360° turn without restrictions, which gives many more working alternatives.

REAR RIPPER

The FI70B motor grader offers a rear ripper of the parallelogram type, which increases the breakdown of compacted hard soils.

INTERCHANGEABLE FRONT BLADE

This blade with parallelogram kinematics is fully interchangeable with the front scarifier, which ensures the machine's application versatility.

SIMPLIFIED MAINTENANCE

The new tipping hood of the F170B allows a wide access to the routine maintenances such as checking the oil level and the replacement of oil and air filters. The level of hydraulic oil by optical display is easy to read. The fuel reservoir nozzle is easily accessible, which allows the refuelling from the ground.

ASSISTANCE, TECHNICAL GUIDANCE, AND PARTNERSHIP AT THE CUSTOMER'S SERVICE

New Holland has an exclusive department to take care of the guidance and technical assistance of the network and its customers called the Customer Support Department. It offers to its dealers all the support and training needed so that they can provide quality services to each of the New Holland machine owners.

Fully computerised and interconnected with the network of dealers, the Department of Customer Support makes available in real-time technical data, service bulletins, and online processing of the machine warranty, which ensures quickness and accuracy in all business relationships with the network of dealers and their customers.

Before launching an equipment on the market, engineers and technicians of New Holland go to the field to train and guide the entire team of technical assistance of its dealers. Only after this step is the equipment made available for sale.

In addition, every time an equipment or part goes through some sort of change or evolution, the Department of Customer Support immediately passes on the knowledge to the technicians and mechanics of the dealers and, in many cases, even directly to customers, which keeps the whole team continually updated.





ENGINE

Horsepower (hp) at 2,200 rpm
Gross (SAE J1995, Gross)

Low Curve	193 hp (144 kW)*1
Mid Curve	205 hp (153 kW)*2
High Curve	220 hp (164kW)*3 Net (SAE J1349)
Low Curve	178 hp (133 kW)*1
Mid Curve	190 hp (142 kW)*2
High Curve	205 hp (153 kW)*3
Make	FPT
Model	F4HE9687B
Compliant	EPA TIER3 Certified
Number of cylinders	6 (in line)
Bore x stroke (mm)	104 X 132
Displacement (litres)	6.7
Maximum rotation (rpm)	2.420
Maximum torque at 1,500 rpm:	
Gross (SAE J1995, Gross)	
Low Curve	830 Nm*1
Mid Curve	880 Nm*2
High Curve	930 Nm*3 Net (SAE J1349)
Low Curve	743 Nm*1
Mid Curve	788 Nm*2
High Curve	832 Nm*3
Fan	Hydraulic
Type	Diesel, 4 stroke, direct injection, turbocharged

Notes: *1 Gears 1st, 2nd, F e 1st, 2nd R
*2 Gears 3rd, 4th, e 3rd R
*3 Gears 5th, 6th



OPERATING WEIGHT (Kg)

Machine with a full fuel tank, equipped with a closed cab ROPS / FOPS and operator weight.

Basic machine weight	15,587
Front axle	4905
Rear axle	10682
Maximum weight	17,642
Front axle	5501
Rear axle	12141



ELECTRICAL SYSTEM

Voltage (V)	24
Amount of batteries	2 x 12V
Total capacity of the batteries (Ah)	100
Alternator	80 A



TRANSMISSION

Powershift Type with torque converter equipped with Lock - up. Electronic control with 6 speed forward and 3 speeds in reverse. Protection against direction changes, over speeding and downshifting. Electronic Monitoring of failures and auxiliary system of moving in case of failure (Go Home).

	Speed (km/h)	
	Forward	Reverse
1 st	4,4	4,6
2 nd	6,8	11,0
3 rd	10,5	25,7
4 th	16,2	
5 th	24,4	
6 th	37,6	



TANDEMS

Structure in a welded rectangular profile

Thickness of the plates (internal/external)	19 mm
Oscillation (for each side)	20°
Drive chain pitch	50.8 mm
Spacing between the axles of the tandem	1,572 mm
Interchangeable gears and shafts , mounted on Tapered roller bearings.	



FRONT AXLE

Welded steel structure of high resistance, assembled with bearings

Wheel lean (to the right and left)	15.3°
Oscillation angle of the axle (each way)	20°
Ground clearance	580 mm



REAR AXLE

Cast iron housing for harsh applications. Heat-treated steel axles, assembled with tapered roller bearings.

Ground clearance	380 mm
Differential	With electro-hydraulic lock (Diff Lock) activated through a switch on the operator console



CHASSIS

Manufactured in closed box, welded.

Front	
Section	254 x 298 mm
Weight per linear meter	172.8 kg/m
Rear (each side)	
Section	121 x 299 mm
Weight per linear meter	84 kg/m



CIRCLE

Fabricated on a single piece of T-section.

Outside diameter (mm)	1.752
Rotation (continual)	360°
Supports (in phenolic resin, replaceable, and adjustable)	4
Support area (cm ²)	2.845
Gear box bathed in oil of hydraulic drive.	



CENTRAL BLADE

Exclusive Roll Away involute profile, with replaceable knives and cutting edges. Control of side and angular shifting hydraulically operated.

Available dimensions

(length x height x thickness)	3,658 x 622 x 22 mm (OPC)
	3,962 x 671 x 22 mm (STD)
	4,267 x 671 x 22 mm (OPC)
Maximum lift above ground	444 mm

Maximum angle of the slope

(both sides)	90°
Blade leaning angle	40° forward 5° backwards
Cutting depth (ground penetration)	711 mm

Blade side shift

Left	533 mm
Right	686 mm

Maximum side reach apart from the wheels with displacement of the circle and saddle turned to the last position

Right	2,065 mm
Left	1,868 mm

Note 1: For the blade to reach with the machine articulated at 25° 684 mm must be added to any dimension.

Note 2: Machines with tires and blades in the STD setting.



HYDRAULIC SYSTEM

Controls fully hydraulic and load sensing type. Closed centre circuits. Blade lift cylinders assembled on the saddle. Locking system of the saddle through a hydraulic cylinder controlled by a solenoid valve activated by a switch located on the side panel. Relief valves and retention for all commands.

Pump Variable flow axial pistons



ATTACHMENTS

Hydraulic pump flow at 2,200 rpm 186 l/min

Maximum pressure of the system 214 kg/cm²



STEERING

Type Hydrostatic

Pump Gears

Rotating angle 42°

Supplementary steering integrated to the steering system

Articulation

Articulation angle (to the right and left) 25°

Number of cylinders 2

Turning radius (measured from the outside of the tires) 7,250 mm



BRAKES

Service brakes

Multidisc, oil bathed, located on the 4 rear wheels, auto-adjustable with two circuits (one for each side of the axle) and nitrogen accumulators that allow the operator to stop the machine in case of a pressure drop in the hydraulic system of the brake or the diesel engine dying.

Pump Gears

Pump flow at 2,200 rpm 42 l/min

Maximum pressure 45 kg/cm²

Parking brakes

Independent, disk type coupled to the output shaft of the transmission, which operates on the four rear wheels and the protection device that prevents the movement of the machine with the parking brake applied. Manual operation.



WHEELS (TYRES AND RIMS)

9" Rim 1-piece/14x24 Tire - 12L - G2-tubeless

10" Rim 3-piece/14x24 Tire - 1 2L - G2 - tubeless (STD)

13" Rim 1-piece/17.5x25 - 12L - L2 - tubeless

14" Rim 3-piece/17.5x25 Tire - 12L - L2 - tubeless

14" Rim 3-piece/17.5x25 Tire - 16L - L3 - tubeless

17" Rim 3-piece/20.5x25 Tire - 12L - L3 - tubeless

17" Rim 3-piece/20.5x25 Tire - 16L - L3 - tubeless

9" Rim 1-piece/14x24 Tire - 12L - L2 - RADIAL XGLA2

10" Rim 3-piece/14x24 Tire - 12L - L2 - RADIAL XGLA2

9" Rim 1-piece with valve

13" Rim 1-piece with valve

10" Rim 3-piece with valve

14" Rim 3-piece with valve



REFUELLING CAPACITIES

Fuel reservoir 341 l

Engine cooling system 40 l

Hydraulic system

Total 190 l

Reservoir 90 l

Diesel motor engine oil with filter 18.5 l

Differential /Rear axle 44 l

Tandem housing (each) 60 l

Turning circle gear box 2.8 l

Transmission with filter 25 l



ACCESSORIES

Front scarifier

Front assembly of parallelogram type

Maximum cutting width 1,168 mm

Maximum penetration 318 mm

Number of teeth 5 or 11

Spacing between teeth

5 teeth 229 mm

11 teeth 115 mm

Maximum lift above ground 527 mm

Weight 570 kg (w/ 5 teeth)

Length of the machine

with scarifier 9,449 mm

Rear scarifiers/ripper

Type Parallelogram, rear assembly

Maximum cutting width 2,195 mm

Soil penetration

Ripper teeth 437 mm

Scarifier teeth 252 mm

Number of teeth

Ripper 3 or 5

Scarifier 5 or 9

Weight

Ripper with 3 teeth and scarifier with 5 teeth 985 kg

Maximum lift above ground

Ripper teeth 518 mm

Scarifier teeth 703 mm

Length of the machine with ripper 9,550 mm



FRONT BLADE

Parallelogram, front assembly, interchangeable with front scarifier.

Dimensions

Width 2,762 mm

Height 953 mm

Soil elevation 622 mm

Soil penetration 165 mm

Length of the machine with retracted blade 9,423 mm

Weight 1,165 kg

EQUIPMENT **SERIES**

■ HIGH OPEN CAB ROPS / FOPS CONTAINING

Vinyl seat with mechanical suspension

Safety seat-belt of 2"

Manual throttle

Foot accelerator

General switch

Adjustable steering column

Access stairs on both sides

Front windshield wiper

Ceiling light

Internal and external rear-view mirrors

12-volt plug-in (*)

The closed cabs also have cup holders and a provision for radio and speakers.

The closed luxury cabs also have inside front wipers and rear wipers, hook to hang a jacket and rear curtain.

All of the ROPS / FOPS cabs are certified according to SAE J1040 (ROPS) and SAE J231 (FOPS) norms.

■ INSTRUMENTS

Hour meter, tachometer, and speedometer

Indicator display of gears and diagnosis of transmission failures

■ INDICATOR LEDS ON THE CENTRAL PANEL

Direction and warning

High beam

Engine oil pressure

Transmission oil pressure

Load pressure of the brake accumulators

Engine water temperature

Transmission oil temperature

Hydraulic oil temperature

Engine air filter restriction

Transmission filter restriction

Hydraulic filter restriction

Battery charge

Parking brake applied

Differential applied (only for rear axle DANA)

■ GAUGES ON THE SIDE PANEL

Fuel gauge

Engine oil pressure gauge

Transmission oil pressure gauge

Engine water temperature gauge

Transmission oil temperature gauge

Traction bar / Standard Circle

■ ELECTRICAL SYSTEM

80 A alternator

2 X 12V Batteries

Horn

Hydraulic gear pump (hydraulic attachments)

Hydraulic controls of blade elevation, turning circle, side displacement of the circle, wheel tilt, side displacement and tilt of the blade, chassis articulation and front and rear accessories

Hydrostatic steering

EDM (Electronic Data Monitor) for monitoring the vital functions of the machine

Air filter with cyclonic dust ejector

Parking brake with warning light

Service brake in oil bath (auto-adjustable)

Work lights assembled on the cab (2 rear ones)

Front lights (2) with turn signal lights

Working lights on the central blade (2)

Brake light

Turn signal lights

12-foot blade

Windshield wipers

5-position saddle

Transmission monitoring system

Basic tool box

Lock valves of the hydraulic cylinders

9" Rim- 1-piece

14x24 Tires 12L - G2 - tubeless

Motor FPT NEF 6.7 liters

(*) Item available only in closed cabins

EQUIPMENT **OPTIONAL**

■ CAB

High closed cab without radio ROPS / FOPS
Luxury high closed cab with radio ROPS / FOPS
Luxury high closed cab without radio ROPS / FOPS
Luxury low closed cab with radio ROPS / FOPS
Luxury low closed cab without radio ROPS / FOPS

■ OTHERS

Ventilation box for closed cab
Heater for closed cab
Air-conditioner for closed cab
Noise insulation for closed cab
Fire extinguisher
Inside windshield wipers
Rear windshield wiper

■ DRAW BAR

Drawbar / Heavy Circle - Heavy Duty

■ REAR AXLE

Electro-hydraulic lock 100% of the differential
Tandem lock

■ FRONT ATTACHMENT

Front blade
Push plate
Front scarifier with 3 teeth
6 additional teeth of the front scarifier
Front traction hook
Front blade floatation electrovalve
Slip shoe of the front blade
Front counterweight

■ BLADE 13' BLADE 14' BLADE

Extension of the front blade - 1'
Extension of the left blade - 1'
Heavy Duty blade corner - additional

■ REAR ATTACHMENT

Light ripper with 5 teeth
Rear traction hook
2 additional teeth
Support for machine lifting

■ WORK LIGHTS

2 front lights on the top part of the cab
2 front working lights on the central blade
2 working lights of the front attachment

■ LOCK/FLOATATION/ANTI-SHOCK - CENTRAL BLADE AND CIRCLE

Lock valve of the central blade lifting cylinder
Central blade floatation electrovalve (incorporates the lock valve)
Anti-shock electrovalve with 2 accumulators
for central blade
Anti-shock electrovalve with 3 accumulators for central
blade and circle

■ SEAT / SAFETY SEAT BELT

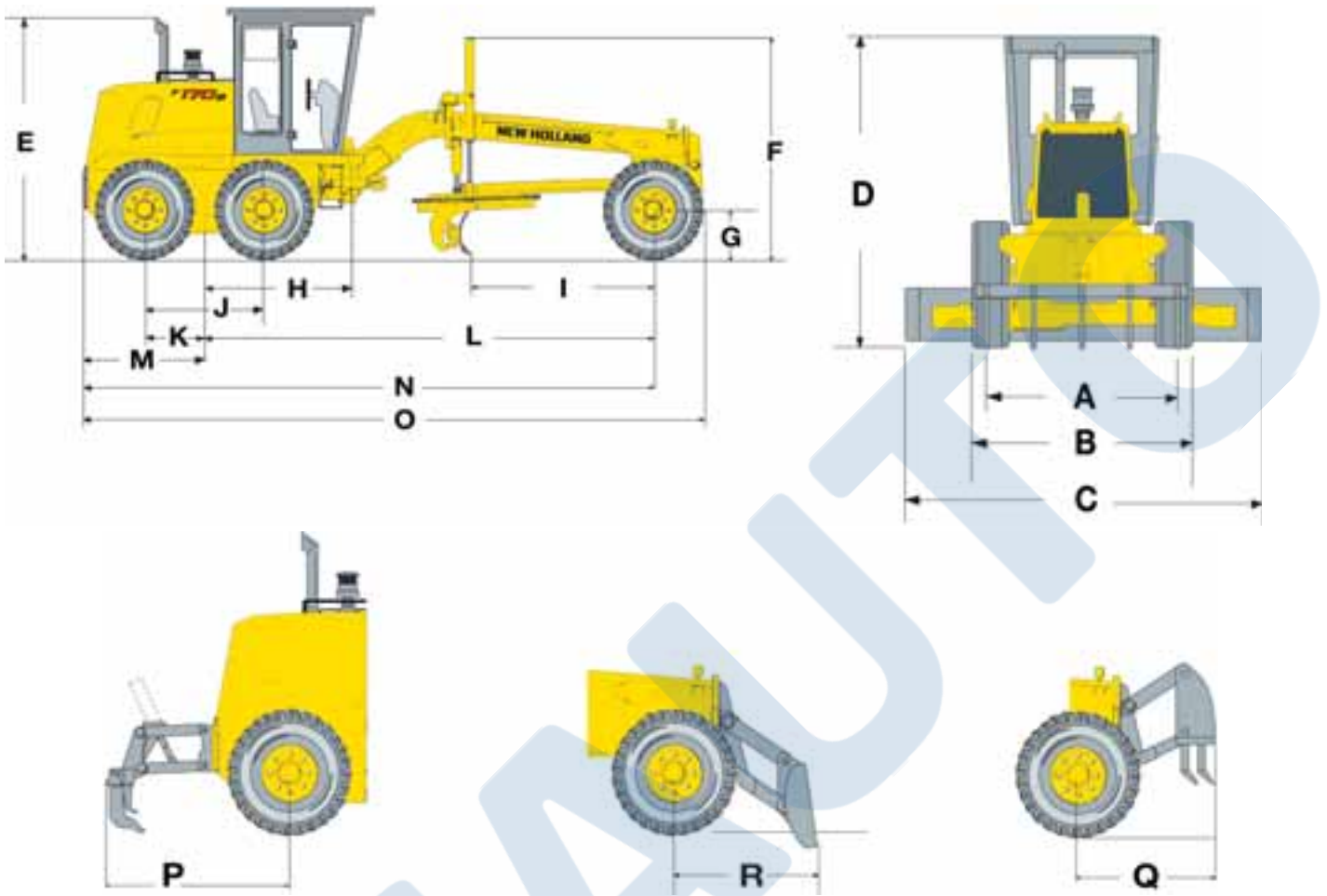
Vinyl seat with mechanical suspension - extra quality
Fabric seat with mechanical suspension
Fabric seat with pneumatic mechanical suspension
Safety seat-belt - 3"

■ OTHER OPTIONS USA BEACON LIGHT LUXURY TOOL BOX

Box without tools with support, fixed on the previous
chassis
Slow-moving symbol
Electric pump to fill a tire
Support for spare tire
Hydraulic pump of axial pistons
Reverse alarm

Note: The standard equipment and its options may vary depending on the selling location of the machine.
Check your dealer for more information.

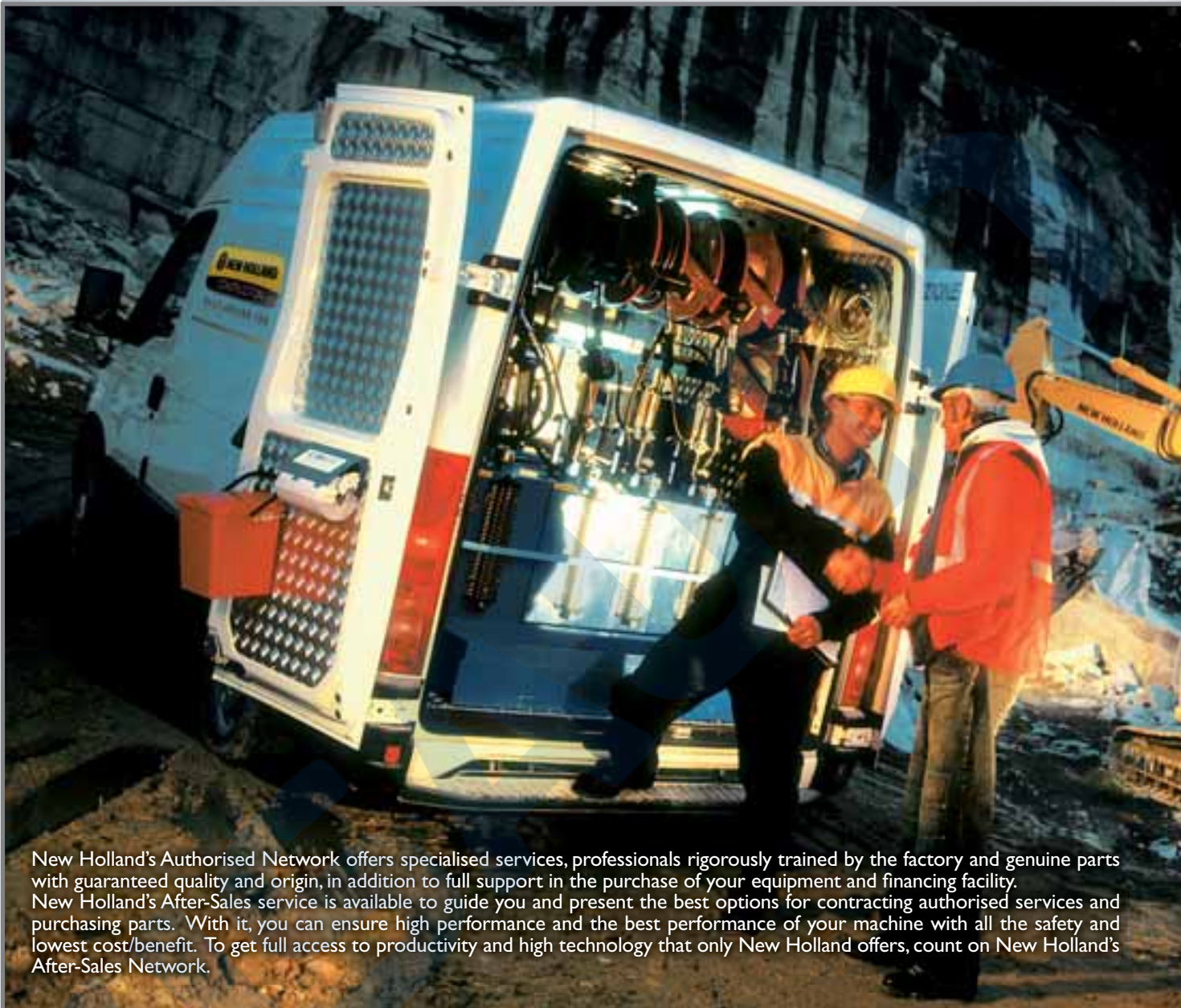
SPECIFICATIONS



SPECIFICATIONS

A	Track	mm	2.106
B	Width on the outside of the tires	mm	2.499
C	Blade width	mm	3.658
D	Height until the top of the cab		
	High profile cab	mm	3.340
	Low profile cab	mm	3.140
E	Height until the top of the escape tube	mm	3.323
F	Height to the top of the blade lift cylinder	mm	3.047
G	Tire static radius	mm	610
H	Distance between the tandem axle to the chassis articulation pin	mm	1.958
I	Distance between the front axle and the blade	mm	2.562
J	Distance between the tandem axles	mm	1.572
K	Distance between the tandem axle and wheel	mm	786
L	Distance between axles	mm	6.219
M	Distance between the tandem axle and the rear of the equipment	mm	1.649
N	Distance between the front wheel axle and the rear of the equipment	mm	7.868
O	Overall length	mm	8.534
P	Distance between the rear tires and ripper	mm	2.028
Q	Distance between the front tires and scarifiers	mm	1.520
R	Distance between the front tires and front blade	mm	1.626
	Turning radius (outside of the tires)*	mm	7.250

After Sales of New Holland's Authorised Network. HIGH PERFORMANCE AND PRODUCTIVITY WARRANTY



New Holland's Authorised Network offers specialised services, professionals rigorously trained by the factory and genuine parts with guaranteed quality and origin, in addition to full support in the purchase of your equipment and financing facility. New Holland's After-Sales service is available to guide you and present the best options for contracting authorised services and purchasing parts. With it, you can ensure high performance and the best performance of your machine with all the safety and lowest cost/benefit. To get full access to productivity and high technology that only New Holland offers, count on New Holland's After-Sales Network.

AT YOUR OWN DEALERSHIP

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