

User manual

Crawler excavator

2503 **3003**

3503 **3703**



Edition: March 2003
Spare part No.: 9707720
Language: English



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Introduction

This manual and all supplementary pages must be kept accessible in the proper place in the vehicle!

This manual contains precise operating and handling, maintenance and service instructions as well as the safety instructions required for operation of the vehicle.

- You should be shown how to operate the vehicle by qualified personnel and carefully read the operating instructions before starting the vehicle.
- The safety, reliability, and operational life of the excavator depend primarily on proper operation and maintenance.
- NEUSON accepts no liability according to product liability laws for any initial or subsequent damage which results from improper use and handling of the products supplied by us.
- Please note that claims or complaints cannot be made on the basis of the information provided in these operating instructions including illustrations and data—in particular concerning construction.
- NEUSON reserves the right to make technical alterations and/or improvements without being bound to make these alterations to previously manufactured vehicles.
- We continuously strive to improve our products. It is therefore possible that alterations have been made to the vehicle which could not be included in these operating instructions before they were printed.
- The vehicle described in this handbook corresponds to the technical standards and safety requirements which applied when the manual was printed.
- Subject to technical alteration.

If you have any further questions, please don't hesitate to contact your NEUSON distributor!

3 Specifications

Technical Data Compact Excavator 2503

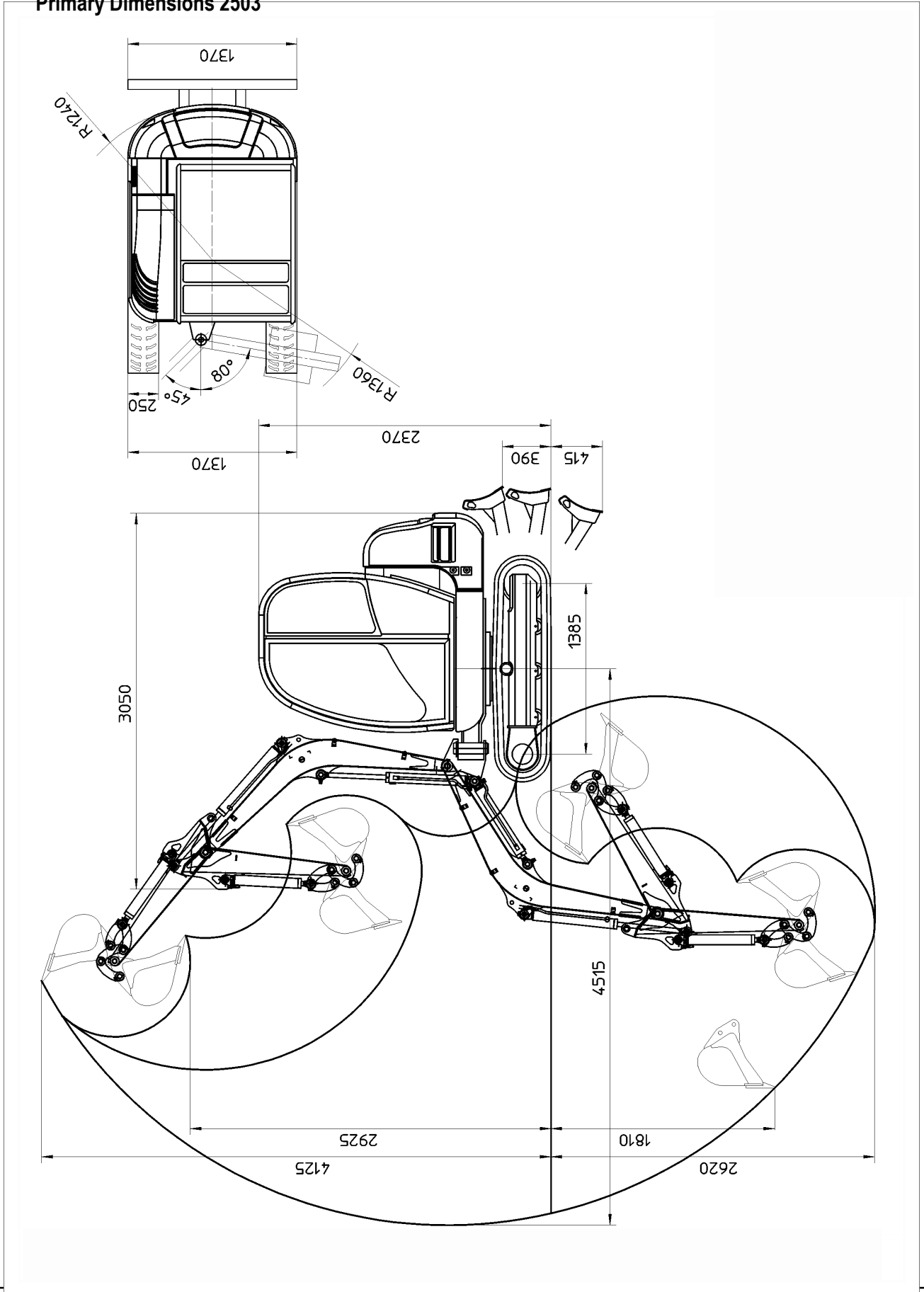
Principal Data 2503

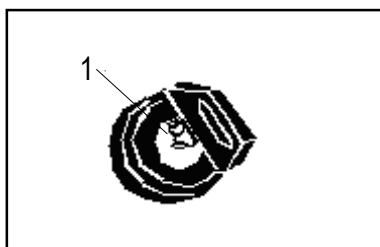
Principal Data 2503	
Unladen weight with cab	2600 kg
Unladen weight with canopy	2500 kg
Height to top of cab	2370 mm
Width	1370 mm
Length	3050 mm
max. digging depth	2605 mm
max. digging height	4125 mm
max. dumping height	2925 mm
max. digging radius	4515 mm
Force per bucket tooth	1970 kp
min. rear swiveling clearance	1240 mm
min. excavator arm clearance	1360 mm
Excavator arm angle left	80°
Excavator arm angle right	45°

Driving and swiveling specifications 2503

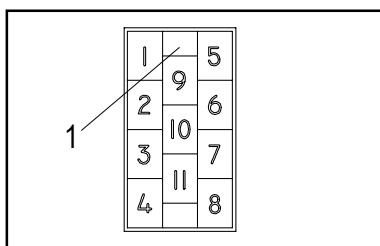
Driving and swiveling specifications 2503	
2 speeds	2,2 & 4,3 km/h
Climbing ability	30° (58%)
Track width	250 mm
Number of track rollers per side	3 per side
Track tensioner	Grease cylinder with tension spring
Ground clearance	270 mm
Ground pressure	0,33 kg/cm ²
Swiveling speed of revolving superstructure	9 revolutions per min

3.6 Primary Dimensions
Primary Dimensions 2503





1 Ignition lock with two keys



1 Fuse box

12 Things to check before starting the excavator

Checking the excavator before operating it can prevent malfunctions during operation. Therefore never neglect these checks.

12.1 Visual inspection

Check:

- * Pressure hoses, hose connections, and hydraulic cylinder seals for oil leaks
- * The radiator for water leaks
- * Engine for water and oil leaks
- * Battery connections

12.2 Check motor oil

Check the oil level using the dipstick. The vehicle must be horizontal and the engine off.



NOTE: The marks on the dipstick indicate the minimum and maximum oil levels.

Top off engine oil if necessary by opening the cap and adding oil from a clean container.



ATTENTION: See the lubricant list for engine oil grade. Only use engine oil of the same quality.

12.3 Check hydraulic oil level

Check the hydraulic oil level in the indicator in the main valve area.

Position of excavator arm while checking hydraulic oil levels:

- Extend arm
- Extend bucket outward and lower it to the ground (piston rods in cylinders)
- Turn off engine

Refill hydraulic oil as necessary. Open the cap and refill the hydraulic oil from a clean container. Close the cap.



CAUTION: Release residual pressure when working on the hydraulic system! The hydraulic oil quality can be checked on the list of lubricants.
Always only use the same quality hydraulic oil.

21 Maintenance every 500 operating hours



NOTE: In addition to normal weekly maintenance and maintenance every 50 and 250 operating hours, the following maintenance should be carried out every 500 operating hours, see maintenance schedule 16.2.

21.1 Engine

See engine operating instructions for maintenance instructions.

Change of Motor Oil

For change of motor oil see operating instructions for the engine. In case of fresh filling make sure to use the correct oil. For released oils please refer to the list of lubricants.

Motor Oil Filter

For change of motor oil filter see operating instructions for the engine.

Check coolant system and hoses

Check electrical connections

Check Electrical Connections

Check Preheating Unit

21.2 Hydraulics



ATTENTION: Always release residual pressure before working on the hydraulic system!

Check primary valves

Adjust settings if necessary.

Defect	Cause	Rectification
SEALS + HOSES		
Oil or fuel leakage below the engine	Loose hose connections Sealings and/or hoses damaged	Tighten hose connection Change sealings and/or hoses and check and refill oil level, if necessary
Oil loss in hydraulic system	Loose hose fittings sealings, hoses, or piping damaged	Tighten hose fittings, check hydraulic oil level, top up if necessary Change sealings, hoses, piping (service workshop)
TRAVELLING GEAR		
Travel not possible	Foreign body jammed Gears defective	Remove foreign body Authorized workshop
Travel straight-ahead not possible	Foreign body jammed Differing chain tension Travel valves damaged	Remove foreign body Tension chains equally Authorized workshop

Standby mode: After entering the user code the green LED goes out. Now you have got 30 sec to start the device. After 30 sec the system returns to the safety mode.

Safety mode: If you shut down the device, the system will change to the safety mode after 12 sec - green LED flashing slowly. Another starting attempt is possible only within this period of 12 sec.

Starting sequence:

1. **Switch on ignition**
2. **Enter user code**
3. **Switch off ignition**
4. **Start within 30 sec**

30.3 Hoisting Operation

Hoisting operation means the lifting, handling and lowering of loads by means of a slinging device (rope, chain), requiring the assistance of persons for attaching and loosening the load. This includes, for example, the lifting and lowering of tubes, shaft lining rings or containers by means of excavators. Operating sequences where the material is taken up by self-gripping devices and the assistance of persons is not necessary are defined as excavator operations.

Overload warning device:

This is a visual or acoustic warning device indicating to the driver that the admissible useful load or the burden and/or the load moment equivalent to the useful load or burden is reached and that continues to indicate overload as long as the useful load, the burden or the load moment is exceeded.

The option hoisting operation is provided with the following devices:

- safeguarding facility against breakage at jib cylinder
- visual/acoustic warning device when the admissible useful load or burden is exceeded

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