SERVICE MANUAL

Boomer™ 40 ROPS / Boomer™ 50 ROPS

Compact Tractor

Boomer™ 40 - From PIN 0 to 2103012735; From PIN 2103012736 to 2106014859; PIN 2106014860 and above;
Boomer™ 50 - From PIN 0 to 2105012137; From PIN 2105012138 to 2105013791; PIN 2105013792 and above

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SERVICE MANUAL

Boomer™ 40 [0 - 2103012735] , Boomer™ 40 [2103012736 - 2106014859] , Boomer™ 40 [2106014860 -] , Boomer™ 50 [0 - 2105012137] , Boomer™ 50 [2105012138 - 2105013791], Boomer™ 50 [2105013792 -]

Link Product / Engine

Product	Market Product	Engine
Boomer™ 40 [0 - 2103012735]	Europe	S4Q2
Boomer™ 40 [2103012736 - 2106014859]	Europe	S4Q2
Boomer™ 40 [2106014860 -]	Europe	S4Q2
Boomer™ 50 [0 - 2105012137]	Europe	S4Q2
Boomer™ 50 [2105012138 - 2105013791]	Europe	S4Q2
Boomer™ 50 [2105013792 -]	Europe	S4Q2

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INTRODUCTION

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Foreword

Boomer™ 40	WE
Boomer™ 50	WE

This repair manual provides the technical information needed to properly service the NEW HOLLAND models Boomer 40 and 50 tractors. Use this manual in conjunction with the operator's manual for complete operation, adjustment, and maintenance information

On NEW HOLLAND equipment, left and right are determined by standing behind the unit, looking in the direction of travel.

Foreword - Important notice regarding equipment servicing

Boomer™ 40	WE
Boomer™ 50	WE

All repair and maintenance work listed in this manual must be carried out only by qualified dealership personnel, strictly complying with the instructions given, and using, whenever possible, the special tools.

Anyone who performs repair and maintenance operations without complying with the procedures provided herein shall be responsible for any subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional, or local dealers, reject any responsibility for damages caused by parts and/or components not approved by the manufacturer, including those used for the servicing or repair of the product manufactured or marketed by the manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the manufacturer in case of damages caused by parts and/or components not approved by the manufacturer.

The manufacturer reserves the right to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions, and illustrative material herein are as accurate as known at time of publication but are subject to change without notice.

In case of questions, refer to your NEW HOLLAND Sales and Service Networks.

International symbols

Boomer™ 40	WE
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As a guide to the operation of the machine, various universal symbols have been utilized on the instruments, controls, switches, and fuse box. The symbols are shown below with an indication of their meaning.


Thermostart starting aid


Alternator charge


Fuel level


Automatic Fuel shut-off


Engine speed (RPM x 100)


Hours recorded


Engine oil pressure


Engine coolant temperature


Coolant level


Tractor lights


Headlamp main beam


Headlamp dipped beam


Work lamps


Stop lamps


Horn


Radio

Keep alive memory


Turn signals

Turn signals -one trailer

Turn signals -two trailers


Front wind-screen wash/wipe


Rear wind-screen wash/wipe


Heater temp-erature control


Heater fan


Air conditioner


Air filter blocked


Parking brake


Brake fluid level


Trailer brake


Roof beacon


Warning ! Corrosive substance


PTO

Transmission in neutral


Creeper gears


Slow or low setting


Fast or high setting


Ground speed


Differential lock


Rear axle oil tem-perature


Transmission oil pressure

FWD engaged

FWD dis-engaged

Warning!

Hazard warning lights

Variable control

Pressurised! Open carefully

Position Control

Draft Control

Accessory socket

Implement socket

%age slip

Hitch raise (rear)

Hitch lower (rear)

Hitch height limit (rear)

Hitch height limit (front)

Hitch dis-abled

Hydraulic and transmission filters

Remote valve extend

Remote valve retract

Remote valve float

Malfunction! See Operator's Manual

Malfunction! (alter-native symbol)

Safety rules

Boomer™ 40	WE
Boomer™ 50 [0 - 2105012137]	WE Platform - With ROPS
Boomer™ 50 [2105012138 - 2105013791]	WE Platform - With ROPS
Boomer™ 50 [2105013792 -]	WE Platform - With ROPS

Personal safety

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: *Notice indicates a situation that, if not avoided, could result in machine or property damage.*

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: *Note indicates additional information that clarifies steps, procedures, or other information in this manual.*

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

Safety rules - Ecology and the environment

Boomer™ 40	WE
Boomer™ 50	WE

Soil, air, and water quality is important for all industries and life in general. When legislation does not yet rule the treatment of some of the substances that advanced technology requires, sound judgment should govern the use and disposal of products of a chemical and petrochemical nature.

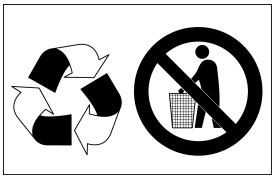
Familiarize yourself with the relative legislation applicable to your country, and make sure that you understand this legislation. Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, anti-freeze, cleaning agents, etc., with regard to the effect of these substances on man and nature and how to safely store, use, and dispose of these substances.

Helpful hints

- Avoid the use of cans or other inappropriate pressurized fuel delivery systems to fill tanks. Such delivery systems may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of these products contain substances that may be harmful to your health.
- Modern oils contain additives. Do not burn contaminated fuels and or waste oils in ordinary heating systems.
- Avoid spillage when you drain fluids such as used engine coolant mixtures, engine oil, hydraulic fluid, brake fluid, etc. Do not mix drained brake fluids or fuels with lubricants. Store all drained fluids safely until you can dispose of the fluids in a proper way that complies with all local legislation and available resources.
- Do not allow coolant mixtures to get into the soil. Collect and dispose of coolant mixtures properly.
- The air-conditioning system contains gases that should not be released into the atmosphere. Consult an air-conditioning specialist or use a special extractor to recharge the system properly.
- Repair any leaks or defects in the engine cooling system or hydraulic system immediately.
- Do not increase the pressure in a pressurized circuit as this may lead to a component failure.
- Protect hoses during welding. Penetrating weld splatter may burn a hole or weaken hoses, allowing the loss of oils, coolant, etc.

Battery recycling

Batteries and electric accumulators contain several substances that can have a harmful effect on the environment if the batteries are not properly recycled after use. Improper disposal of batteries can contaminate the soil, groundwater, and waterways. NEW HOLLAND strongly recommends that you return all used batteries to a NEW HOLLAND dealer, who will dispose of the used batteries or recycle the used batteries properly. In some countries, this is a legal requirement.



Mandatory battery recycling

NOTE: *The following requirements are mandatory in Brazil.*

Batteries are made of lead plates and a sulfuric acid solution. Because batteries contain heavy metals such as lead, CONAMA Resolution 401/2008 requires you to return all used batteries to the battery dealer when you replace any batteries. Do not dispose of batteries in your household garbage.

Points of sale are obliged to:

- Accept the return of your used batteries
- Store the returned batteries in a suitable location
- Send the returned batteries to the battery manufacturer for recycling

Safety rules - Personal safety

Boomer™ 40	WE
Boomer™ 50	WE

⚠ General safety rules ⚠

Read this manual carefully before starting, using carrying out maintenance, refueling or performing any other type of operation on the tractor.

Read all the safety decals on the tractor and follow the instructions thereon before starting, operating, refueling or carrying out maintenance on the tractor. Promptly replace any decals that are damaged, lost or illegible. Clean the decals if they are covered by mud or debris.

The tractor must only be used by responsible personnel, trained in tractor use and authorized to operate the tractor.

Use caution when operating the tractor on slopes. Raised equipment, full tanks and other loads will change the center of gravity of the tractor. The tractor can tip or roll over when near ditches and embankments or uneven surfaces.

Avoid using the tractor in unsuitable physical conditions, stop work instead.

Never permit anyone other than the operator to ride on the tractor.

Never operate the tractor under the influence of alcohol, drugs, or while otherwise impaired.

When digging or using ground engaging attachments be aware of buried cables. Contact local utilities to determine the locations of services.

Pay attention to overhead power lines and hanging obstacles. High voltage lines may require significant clearance for safety.

Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin, causing serious injury or infection.

- DO NOT use your hand to check for leaks. Use a piece of cardboard or paper.
- Stop engine, remove key and relieve the pressure before connecting or disconnecting fluid lines.
- Make sure all components are in good condition and tighten all connections before starting the engine or pressurizing the system.
- If hydraulic fluid or diesel fuel penetrates the skin, seek medical attention immediately.
- Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.
- Before removing any hydraulic tubing, check that the system is not pressurized.

Do not alter the calibration of the pressure relief valves in the various hydraulic circuits (steering, hydraulic lift, auxiliary distributors, etc.).

Keep clear of moving parts. Loose clothing, jewelry, watches, long hair, and other loose or hanging items can become entangled in moving parts.

Wear protective equipment when appropriate.

DO NOT attempt to remove material from any part of the tractor while it is being operated or components are in motion.

Make sure all guards and shields are in good condition and properly installed before operating the tractor. Never operate the tractor with shields removed. Always close access doors or panels before operating the tractor.

Enter and leave the tractor using the steps and handles provided. Dirty or slippery steps, ladders, walkways, and platforms can cause falls. Make sure these surfaces remain clean and clear of debris.

A person or pet within the operating area of a tractor can be struck or crushed by the tractor or its equipment. DO NOT allow anyone to enter the work area.

Raised equipment and/or loads can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.

Never operate engine in enclosed spaces as harmful exhaust gases may build up.

Before starting the tractor, be sure that all controls are in neutral or park lock position.

Before starting the engine, make sure that all attached implements are lowered to the ground.

Start the engine only from the operator's seat. If the safety start switch is bypassed, the engine can start with the transmission in gear. Do not connect or short across terminals on the starter solenoid. Attach jumper cables as described in the manual. Starting in gear may cause death or serious injury.

Always keep windows, mirrors, all lighting, and Slow Moving Vehicle (SMV) emblem clean to provide the best possible visibility while operating the tractor.

Operate controls only when seated in the operator's seat, except for those controls expressly intended for use from other locations.

Before leaving the tractor:

1. Park tractor on a firm level surface.
2. Put all controls in neutral or park lock position.
3. Engage park brake. Use wheel chocks if required.
4. Lower all hydraulic equipment — Implements, header, etc.
5. Turn off engine and remove key.

When, due to exceptional circumstances, you would decide to keep the engine running after leaving the operator's station, then the following precautions must be followed:

1. Bring the engine to low idle speed.
2. Disengage all drive systems.
3. **⚠ WARNING**

   Some components may continue to run down after you disengage drive systems.
   Make sure all drive systems are fully disengaged.
   Failure to comply could result in death or serious injury.

   W0113A

   Shift the transmission into neutral.
4. Apply the parking brake.

⚠ Using the tractor ⚠

1. Select the most suitable wheel setting for the work in hand, i.e.: the setting that provides the best stability.
2. Depress the speed control pedal slowly: if engaged too quickly, especially when the tractor is getting out of a hole, ditch or operating on muddy ground or steep slopes, the tractor may overturn.

   Release the speed control pedal immediately if front wheels begin to lift.
3. When traveling downhill, keep the tractor in gear. Never place shuttle shift lever in the neutral position.
4. When the tractor is moving, the operator must remain correctly seated in the driving position.
5. Never get on or off the tractor while in movement.
6. When using the brakes, press the pedal down slowly.
7. Avoid taking turns at high speeds.
8. Always use the tractor at a speed that will guarantee safe operation on the type of land being worked. When working on uneven ground, use maximum care to ensure proper stability.
9. If you have to work with the tractor on a gradient, for example on hillsides, drive at moderate speed especially when taking turns.
10. Proceed with maximum caution when working with the wheels near the edge of ditches or slopes.
11. When driving on public highways, observe the Highway Code.

⚠ General maintenance safety ⚠

Keep area used for servicing the tractor clean and dry. Clean up spilled fluids.

Service tractor on a firm level surface.

Install guards and shields after servicing the tractor.

Close all access doors and install all panels after servicing the tractor.

Do not attempt to clean, lubricate, clear obstructions or make adjustments to the tractor while it is in motion or while the engine is running.

Always make sure working area is clear of tools, parts, other persons and pets before you start operating the tractor.

Unsupported hydraulic cylinders can lose pressure and drop the equipment causing a crushing hazard. Do not leave equipment in a raised position while parked or during service, unless securely supported.

Jack or lift the tractor only at jack or lift points indicated in this manual.

Incorrect towing procedures can cause accidents. When towing a disabled tractor follow the procedure in this manual. Use only rigid tow bars.

Stop the engine, remove key and relieve pressure before disconnecting or connecting fluid lines.

Stop the engine and remove key before disconnecting or connecting electrical connections.

Scalding can result from incorrect removal of coolant caps. Cooling system operates under pressure. Hot coolant can spray out if a cap is removed while the system is hot. Allow system to cool before removing cap. When removing a cap turn it slowly to allow pressure to escape before completely removing the cap.

Replace damaged or worn tubes, hoses, electrical wiring, etc.

Engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when servicing such components. Allow surfaces to cool before handling or disconnecting hot components. Wear protective equipment when appropriate.

When welding, follow the instructions in the manual. Always disconnect the battery before welding on the tractor. Always wash your hands after handling battery components.

Before touching any electrical components, disconnect the ground lead from the battery.

Only remove the radiator cap after the engine has been allowed to cool. With the engine switched off, use a cloth to slowly unscrew the cap and release the pressure before completely removing the cap.

⚠ Wheels and tires ⚠

Upon receiving your tractor, check the air pressure in the tires and check every 50 hours or weekly. Refer to the table below for tire pressure for normal operation.

Make sure tires are correctly inflated. Do not exceed recommended load or pressure. Follow instructions in the manual for proper tire inflation.

Tires are heavy. Handling tires without proper equipment could cause death or serious injury.

Never weld on a wheel with a tire installed. Always remove tire completely from wheel prior to welding.

Always have a qualified tire technician service the tires and wheels. If a tire has lost all pressure, take the tire and wheel to a tire shop or your dealer for service. Explosive separation of the tire can cause serious injury.

DO NOT weld to a wheel or rim until the tire is completely removed. Ensure the rim is clean and free of rust or damage. Do not weld, braze, otherwise repair or use a damaged rim. Inflated tires can generate a gas mixture with the air that can be ignited by high temperatures from welding procedures performed on the wheel or rim. Removing the air or loosening the tire on the rim (breaking the bead) will NOT eliminate the hazard. This condition can exist whether tires are inflated or deflated. The tire MUST be completely removed from the wheel or rim prior to welding the wheel or rim.

When changing or storing tires, make sure they are stacked correctly and cannot roll or topple over causing personal injury.

When checking tire pressures, inspect the tires for damaged tread and side walls. Incorrect pressure will lead to early tire failure.

Do not inflate a tire that has been run flat or seriously under-inflated until it has been inspected for damage by a qualified person.

Torque wheel bolts to specification after installing the wheel. Check nut tightness daily until torque stabilizes.

Refer to the 'TRACTOR BALLASTING' section in the Operator’s Manual before adding ballast to the tires.

Use jack stands or other suitable blocking to support the tractor while repairing tires. Ensure the jack is placed on a firm, level surface. Ensure the jack has adequate capacity for lifting your tractor. Do not put any part of your body under the tractor or start the engine while the tractor is on the jack.

Never hit a tire or rim with a hammer.

Do not inflate a tire unless the rim is mounted on the tractor or is secured so that it will not move if the tire or rim should suddenly fail.

⚠ Driving on public roads and general transportation safety ⚠

Comply with local laws and regulations.

Use appropriate lighting to meet local regulations.

Make sure Slow-Moving Vehicle (SMV) emblem is visible.