

3 - CONTROLS AND INSTRUMENTS

Access to operator's platform

Operator's platform access - Roll Over Protective Structure (ROPS)

Roll Over Protective Structure (ROPS) type tractor

Entering and exiting the tractor:

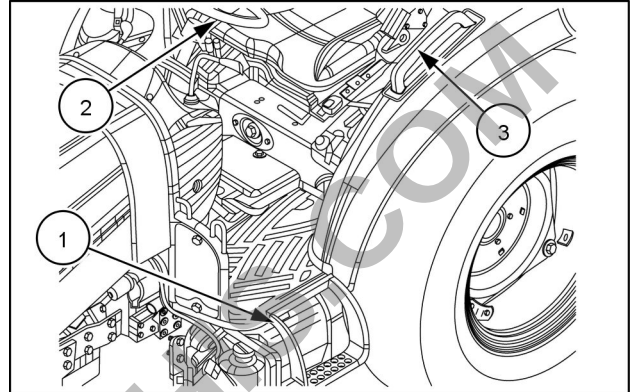
- Whenever possible, use the left-hand side step (1) for entering and exiting the tractor operator's platform.
- When boarding the tractor, use the step (1), steering wheel (2) and grab handle (3) on the left fender.

⚠ WARNING

Fall hazard!

Jumping on or off the machine could cause an injury. Always face the machine, use the handrails and steps, and get on or off slowly. Maintain a three-point contact to avoid falling: both hands on the handrails and one foot on the step, or one hand on the handrail and both feet on the steps.

Failure to comply could result in death or serious injury.



NHIL16CT00386AA 1

W0141A

4 - OPERATING INSTRUCTIONS

Commissioning the unit

Engine break-in procedure

Your tractor will provide long and dependable service if given proper care during the first 50-hour break-in period. During the first 50 hours of operation:

1. Avoid "lugging" the engine. Operating in too high a gear under heavy load may cause engine lugging, which is indicated when the engine will not respond to a throttle increase.
2. Use the lower gear ratios when pulling heavy loads and avoid continuous operation at constant engine speeds. You will save fuel and minimize engine wear by selecting the correct gear ratio for a particular operation. Operating the tractor in low gear with a light load and high engine speed wastes fuel.
3. Avoid prolonged operation at either high or low engine speeds without a load on the engine.
4. Check the instruments frequently and keep the radiator and oil reservoirs filled to recommended levels. Daily checks include the engine oil level, radiator coolant, and air cleaner.
5. After the first 50 hours of use, be sure to perform the maintenance items listed in the maintenance schedule.

7 - MAINTENANCE

General information

General information

Adequate lubrication and maintenance on a regular schedule is vital to maintaining your equipment. To ensure long service and efficient operation, follow the lubrication and maintenance schedules outlined in this manual. The use of proper fuels, oils, grease and filters, as well as keeping the systems clean, will also extend machine and component life.

NOTICE: While any company can perform necessary maintenance or repairs on your equipment, NEW HOLLAND strongly recommends that you use only authorized NEW HOLLAND dealers and products that meet the given specifications. Improperly or incorrectly performed maintenance and repair voids the equipment warranty and may affect service intervals.

NOTICE: Always use genuine NEW HOLLAND replacement parts, oils and filters to ensure proper operation, filtration of engine and hydraulic systems. See your NEW HOLLAND dealer for additional oil quantities.

Regular lubrication is the best insurance against delays and repairs. Proper lubrication will extend machine life. Refer to the following charts for lubricants and service intervals.

NOTICE: Failure to complete the required maintenance at the recommended intervals can cause unnecessary downtime.

Use the intervals listed in the Lubrication Chart as guidelines when operating in normal conditions. Adjust the intervals for operating in adverse environmental and working conditions. Shorten the intervals for sandy, dusty, and extremely hot operating conditions.

⚠ WARNING

Avoid injury!

1. Disengage all drives.
2. Engage parking brake.
3. Lower all attachments to the ground, or raise and engage all safety locks.
4. Shut off engine.
5. Remove key from key switch.
6. Wait for all machine movement to stop.

Failure to comply could result in death or serious injury.

W1197A

⚠ WARNING

Illustrations in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment.

Replace all shields before operating the machine.

Failure to comply could result in death or serious injury.

W0012A

⚠ WARNING

Entanglement hazard!

Disengage the Power Take-Off (PTO), turn off the engine, and remove the key. Wait for all movement to stop before you leave the operator's position. Never adjust, lubricate, clean, or remove a blockage of crop material when the engine is on.

Failure to comply could result in death or serious injury.

W0227B

8 - TROUBLESHOOTING

Symptom(s)

Engine - Troubleshooting

Problem	Possible Cause	Correction
The start motor does not rotate with the key switch in the (START) position.	Low battery charge	Charge or replace
	Loose battery or starter cable terminals	Tighten the terminal
	Key switch faulty	Repair or replace switch
	Safety start switch not completing circuit	Depress clutch pedal fully
	PTO safety switch is not in "OFF" position	Place PTO switch in "OFF" position
	Starter motor faulty	Repair or replace starter motor
The start motor rotates but the engine does not start	Low battery charge	Charge or replace battery
	Air in fuel system	Bleed out the air
	Fuel filter clogged	Clean or replace the filter
Engine speed is irregular	Air in fuel system	Bleed the fuel system
	Fuel filter clogged	Clean or replace the filter
	Injection nozzle clogged	Repair or replace nozzle
	Fuel leakage	Repair fuel system
Engine stops suddenly during operation	Fuel shortage	Add fuel and bleed air from fuel system
	Faulty fuel injector	Repair or replace injector
	Internal parts of engine seized due to lack of lubrication	Repair engine as needed
Engine stops suddenly during operation	Fuel shortage	Add fuel and bleed air from fuel system
	Faulty fuel injector	Repair or replace injector
	Internal parts of engine seized due to lack of lubrication	Repair engine as needed
Engine overheating	Lack of coolant	Add coolant as needed
	Fan belt slipping or belt is broken	Adjust belt tension or replace belt
	Dirt attached to the radiator or prescreen	Clean radiator fins or screen as needed
The color of exhaust smoke is white	Low engine operating temperature	Allow engine to obtain higher operating temperature
	Engine burning engine oil	Repair engine as needed
	Engine coolant entering engine exhaust	Repair engine as needed
The color of exhaust gas is black.	Air filter clogged	Clean or replace engine air filter
	Excessive fuel supply	Contact authorized dealer
	Faulty fuel injector	Contact authorized dealer
Low engine power	Fuel injector nozzle clogged	Repair injector as needed
	Carbon accumulation on valve seat	Repair valve and seats as needed
	Incorrect valve gap adjustment	Adjust valve gap to correct amount
	Lack of fuel supply	Check fuel system for restriction
	Air filter clogged	Clean or replace air filter
	Lack of engine oil	Add engine oil as needed
Instrument panel engine oil pressure indicator light is "ON" during operation.	Low viscosity of engine oil	Replace oil with proper viscosity type
	Faulty pressure switch	Replace switch
	Faulty engine oil pump	Repair oil pump as needed
	Engine oil filter clogged	Replace the filter
Instrument panel battery charging indicator is "ON" during operation.	Bad electrical connection	Check battery terminals, ground, and repair as needed

9 - SPECIFICATIONS

Wheel tread settings

NOTE: Tread settings are measured from center of tire to center of tire.

Blurred on purpose. The manual you buy has this page in full quality.

Contents

1 GENERAL INFORMATION

Note to the owner.....	1-1
Tractor intended use.....	1-2
Emissions overview	1-4
Electro-Magnetic Compatibility (EMC)	1-7
Manual scope.....	1-7
Product Identification Number (PIN).....	1-9
Operator's manual storage on the machine - Roll Over Protective Structure (ROPS).....	1-10
Operator's manual storage on the machine - Cab.....	1-10
Machine orientation - Roll Over Protective Structure (ROPS).....	1-11
Machine orientation - Cab	1-12

2 SAFETY INFORMATION

Safety rules and signal word definitions	2-1
Safety rules	2-2
Do not operate tag.....	2-10
Folding Roll Over Protective Structure (ROPS)	2-11
Starting up the machine safely	2-12
Stopping the machine safely	2-17
Ecology and environment	2-18
Safety signs - Cab	2-19
Safety signs - Roll Over Protective Structure (ROPS)	2-31
Instructional signs - Cab.....	2-43
Instructional signs - Roll Over Protective Structure (ROPS)	2-50

3 CONTROLS AND INSTRUMENTS

Access to operator's platform

Operator's platform access - Roll Over Protective Structure (ROPS).....	3-1
Cab door.....	3-2
Cab side window	3-3
Cab rear window	3-3

Operator's seat

Seat belt - Cab	3-4
Seat belt - Roll Over Protective Structure (ROPS)	3-4
Seat controls - Cab	3-5
Seat controls - Roll Over Protective Structure (ROPS).....	3-6

Forward controls

Instrument panel.....	3-7
Engine fault code display.....	3-11
Cruise control.....	3-18
Transmission shuttle shift lever.....	3-19
Clutch pedal	3-19

2 - SAFETY INFORMATION

Safety rules and signal word definitions

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 and on machine safety signs, 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. The color associated with DANGER is RED.

⚠ WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury. The color associated with WARNING is ORANGE.

⚠ CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury. The color associated with CAUTION is YELLOW.

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 damage or property damage. The color associated with Notice is BLUE.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine damage 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.

Overhead controls

Cab climate control	3-52
Air conditioning	3-53
Front sun shade	3-57
Rear-view inside mirror	3-57

Exterior controls

Rear-view outside mirrors	3-58
Hood release latch	3-58

4 OPERATING INSTRUCTIONS

Commissioning the unit

Engine break-in procedure	4-1
Diesel Particulate Filter (DPF) regeneration	4-2
Engine speed management – Roll Over Protection Structure (ROPS)	4-7
Engine speed management – Cab	4-8
Power Take Off (PTO) operation - Cab	4-9
Power Take-Off (PTO) - Roll Over Protective Structure (ROPS)	4-11
Three-point linkage	4-13
Attaching three-point equipment	4-14
Extendable drawbar - Cab	4-18
Extendable drawbar - Roll Over Protective Structure - (ROPS)	4-19
Top link adjustment	4-20
Hydraulic Power Lift (HPL) drop rate control valve	4-20
Roll Over Protective Structure (ROPS) Fold up/down	4-21

Starting the unit

Key switch	4-23
Cold starting aids	4-24
Starting the engine (Mechanical)	4-25
Starting the engine (Hydrostatic transmission)	4-28
Starting the tractor with jumper cables	4-31

Stopping the unit

Stopping the engine	4-32
Emergency stopping - Cab	4-33
Emergency stopping - Roll Over Protective Structure - (ROPS)	4-34
Brakes - HST and Mechanical transmissions	4-35

Moving the unit

Steering wheel adjustment	4-38
Steering operation	4-39
Transmission operation at low ambient temperatures	4-40
Hydrostatic transmission (HST) operation	4-41
16 x 16 Synchronized transmission operation	4-43

(13)
WARNING

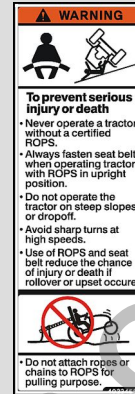
To prevent serious injury or death:

- Never operate a tractor without a certified ROPS.
- Always fasten seat belt when operating tractor with ROPS in upright position.
- Do not operate the tractor on steep slopes or drop-off.
- Avoid sharp turns at high speeds.
- Use of ROPS and seat belt reduce the chance of injury or death if rollover or upset occur.
- Do not attach ropes or chains to ROPS for pulling purpose.

Failure to comply could result in death or serious injury.

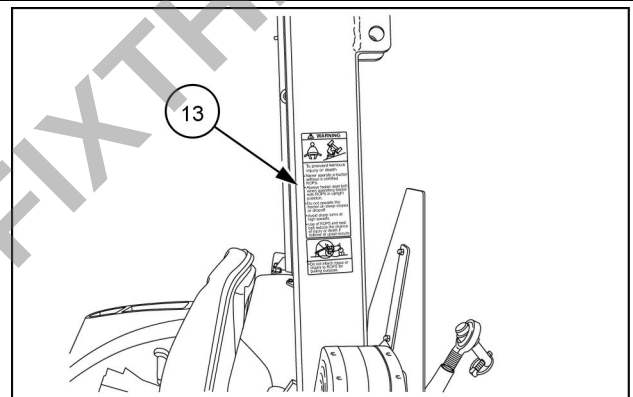
Quantity: 1

English Part Number: MT40234561



40234561 26

(13) Location: On the left-hand side of the ROPS frame.



83115221 27

(14)
WARNING
RUN OVER HAZARD

To prevent serious injury or death:

- Start only from seat with transmission and PTO in neutral
- Do not short across starter terminals to start engine.

Failure to comply could result in death or serious injury.

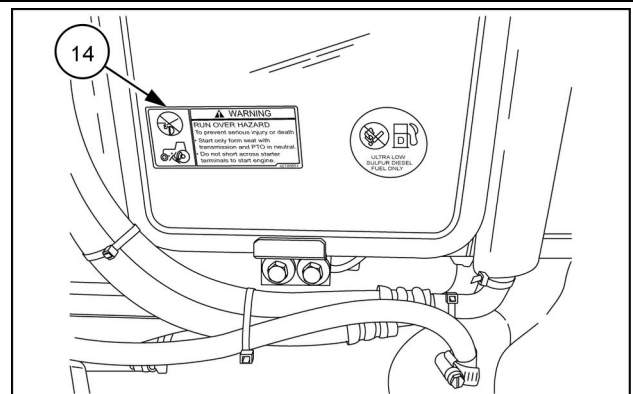
Quantity: 1

English Part Number: MT40195651



40195651 28

(14) Location: On the left-hand side of the operator's platform, at the front of the platform.

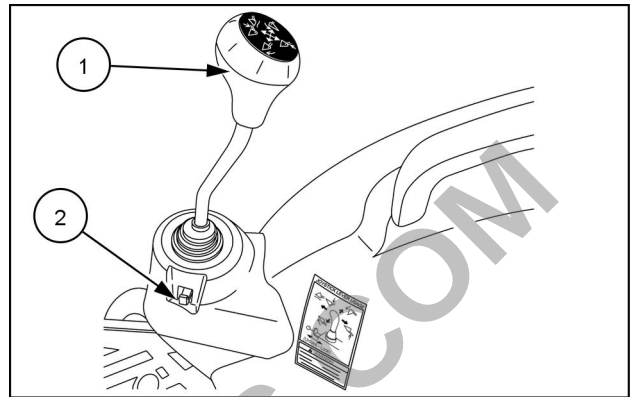


NH16CT00703AA 29

Mid mount two spool control valve - Roll Over Protective Structure (ROPS)

The mid mount two-spool control valve **(1)** location is to the front of the right-hand fender. This control valve's purpose is for front-end loader operation, and to operate other front mounted implements.

The control valve is equipped with a linkage lockout **(2)** that locks the control valve handle in the neutral position and does not allow the valve to operate.

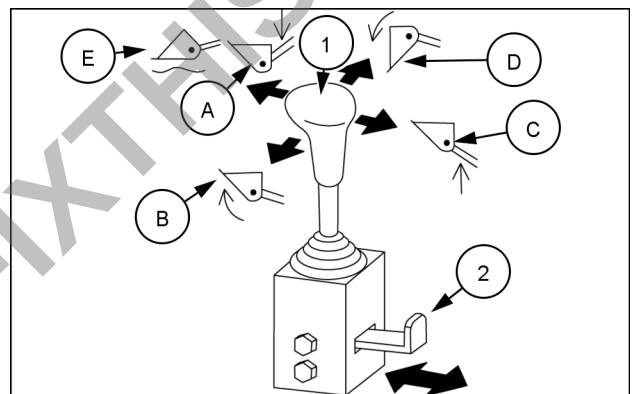


NHIL13CT01193AA 1

To operate the control valve, move the control lever **(1)** in any of the four directions.

Release the control lever to stop the cylinder in any position, the lever automatically returns to neutral.

- Move the control lever forward to lower the loader/retract cylinder **(A)**.
- Move the control lever to the left to curl the bucket/retract cylinder **(B)**.
- Move the control lever rearward to raise the loader/extend cylinder **(C)**.
- Move the control lever to the right to dump bucket/extend cylinder **(D)**.



93100858 2

Move the control lever fully forward to "FLOAT" position **(E)** which allows the loader boom lift cylinders to extend or retract. This valve position will allow the loader to follow the ground contour during operation.

NOTE: Do not use the "FLOAT" position **(E)** if the loader bucket is off the ground.

NOTE: Push the lockout tab **(2)** inwards to lock the valve control lever when the two-spool control valve is not used.

16 x 16 Synchronized transmission operation

The 16 x 16 mechanical transmission operates through the use of a clutch pedal (1) a forward/reverse shuttle shift lever (2) main transmission shift lever (3) and a range selector lever (4).

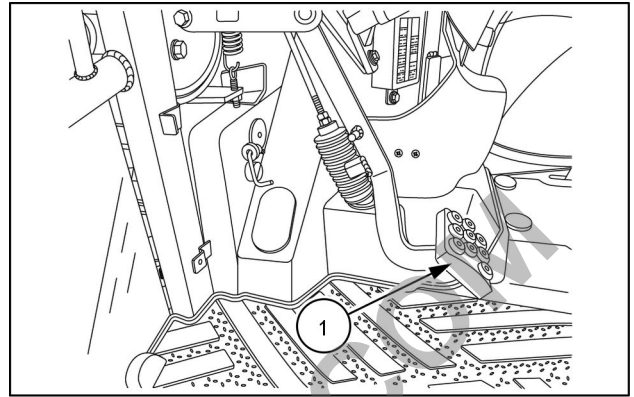
The combinations of shuttle shift, main shift, and range selector lever offer the operator a combination of sixteen forward and sixteen reverse gears.

The main transmission shift lever (3) operates in a H-pattern. To change gears while in a selected range, depress the clutch pedal and shift the main gear shift lever into the desired gear. The tractor does not have to be stopped because the main speed gears (1-4) are synchronized.

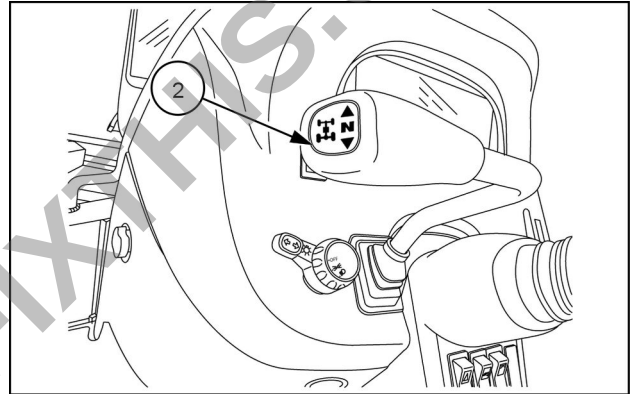
The range gear shift lever operates in a straight pattern (1-2-N-3-4) with a neutral position between second and third range.

NOTICE: Never attempt to engage or disengage the range shift lever when the tractor is in motion.

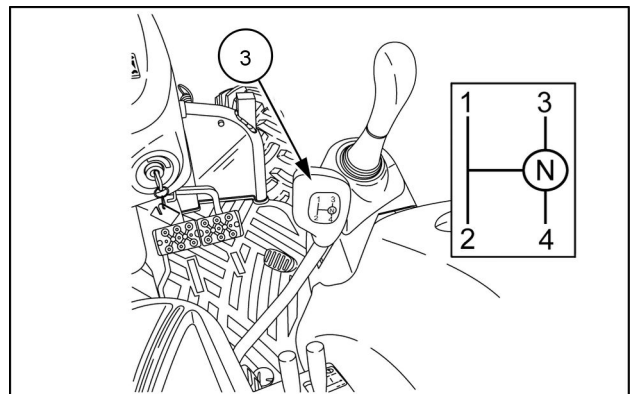
NOTE: The shift patterns are shown as sitting in the operators seat.



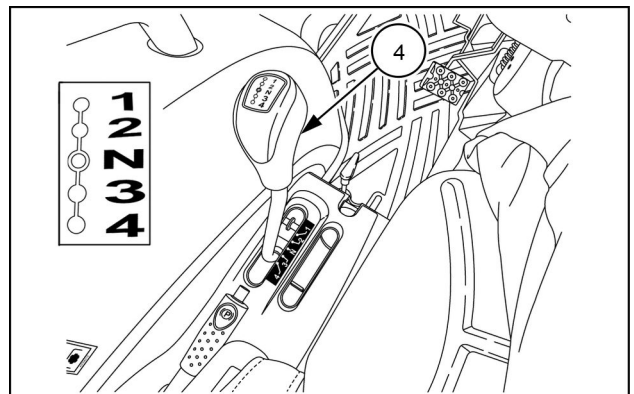
NHIL13CT01146AA 1



NHIL13CT01132AA 2



NHIL13CT01355AA 3



NHIL13CT01354AA 4

Every 300 hours

Engine oil and oil filter - Change

See 7-18

Hydraulic oil filter - Replace

See 7-20

Hydrostatic Transmission (HST) oil filter - Replace

See 7-20 .

Engine belts - Check

See 7-27.

Wheel bolt / nut - Check

See 7-28.

Air cleaner primary element - Replace

⚠ WARNING

Rotating parts!
Do not start the engine while you perform this procedure.
Failure to comply could result in death or serious injury.

W1374A

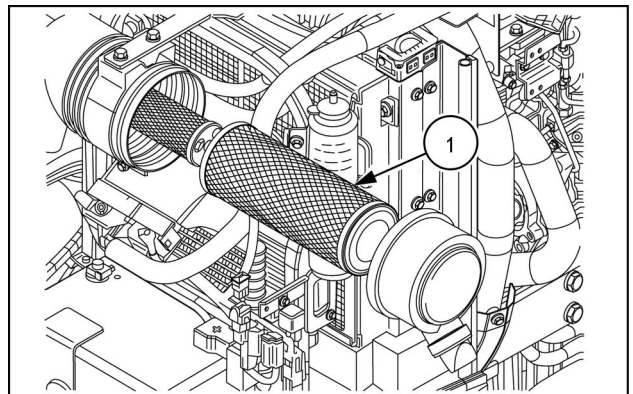
NOTE: Replace the primary element after every 300 hours of service. Extremely dusty conditions may require more frequent service intervals.

1. Pull the primary element (1) from the canister. Clean any loose dirt from the canister and inspect the end of the canister for dirt, which may prevent the new element from sealing properly.
2. Install the new primary element by inserting it into the canister and pushing on the end of the element until it seats against the canister.

NOTE: If element is not inserted far enough into canister, the end cap cannot be installed.

3. Place the end cap onto the canister body, push in on end cap, and rotate clockwise. Make sure the end cap locks in place and is not loose.

NOTICE: Failure to obtain a good seal between elements and the canister may cause major engine damage.



NHIL16CT00464AA 1

PREVIEW ONLY

You're viewing 12 of 296 pages

The full manual includes:

- All 296 pages, complete
 - Searchable PDF (find any keyword)
 - No watermarks
 - Instant download
 - Print-ready quality
-

GET FULL MANUAL NOW

New Holland Boomer 45, Boomer 50, Boomer 55 Operator Manual



Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual