OPERATOR'S MANUAL

U80C
Tier 4
Tractor Loader

PIN NCC570800 and above

Part number 47492960
2nd edition English
April 2013
Replaces part number 84587650

NEW HOLLAND CONSTRUCTION

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publication 4... Order the manual at mid-west-tech.com >

Contents

1 GENERAL INFORMATION

Intended use 1-1
CNH America LLC technical manuals 1-2
Electro-Magnetic Compatibility (EMC) 1-3
Note to the owner 1-3
Read the Operator's Manual 1-4
Manual storage 1-4
Right, left, front and rear of the machine 1-5
Component Identification 1-6
Product Identification Number (PIN) 1-9
Exhaust Gas Recirculation (EGR) - Diesel Particulate Filter (DPF) exhaust treatment - Product overview 1-12

2 SAFETY INFORMATION

Safety rules 2-1
Safety rules - California Proposition 65 Warning 2-2
Safety rules - General 2-3
Safety rules - Air conditioning system 2-3
Safety rules - Basic operating 2-4
Safety rules - Battery 2-5
Safety rules - Electrical storm safety 2-6
Safety rules - Fire or explosion prevention 2-6
Safety rules - Fuel handling precautions 2-7
Safety rules - Hazardous chemicals 2-7
Safety rules - Lifting and overhead loads 2-7
Safety rules - General maintenance precautions 2-8
Safety rules - Mounting and dismounting 2-9
Safety rules - Operator precautions 2-9
Safety rules - Specific precautions to this machine 2-10
Safety rules - Transporting precautions 2-10
Safety rules - Utility precautions 2-11
Safety rules - Wheels and tires 2-12
Safety rules - Ductile iron 2-12
Safety rules - Roll Over Protective Structure (ROPS) 2-13
Safety rules - Seat belt 2-14
Safety signs 2-15
Hand signals 2-34
Do Not Operate hang tag 2-36

3 CONTROLS/INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

Machine access 3-1

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publicati... Order the manual at mid-west-tech.com >

OPERATOR'S SEAT
Operator seat 3-2

FORWARD CONTROLS
Front controls 3-5
Pedal controls 3-7

RIGHT-HAND SIDE CONTROLS
Loader functions 3-8
Console controls 3-12
Rear hitch controls 3-17
Cab controls and adjustments 3-19
Advanced instrument cluster (AIC) 3-20
Menu screen display 3-24

4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT
Run in period of a new machine 4-1
Engine speed 4-1

STARTING THE UNIT
Before starting the engine 4-2
Normal engine starting 4-3
Cold temperature operation 4-4
Hot temperature operation 4-6
Booster battery procedure 4-7

STOPPING THE UNIT
Shutting down the engine 4-9

MOVING THE UNIT
Uniform braking 4-10
Traveling on a hill 4-11
Machine direction 4-11
Transmission gears 4-12
Before operating the machine 4-13
Differential lock system 4-14
Four Wheel Drive (4WD) control 4-15
Glide ride (if equipped) 4-16

5 TRANSPORT OPERATIONS

ROAD TRANSPORT
Transporting on a trailer 5-1

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publicati... Order the manual at mid-west-tech.com >

RECOVERY TRANSPORT

Towing the machine 5-3

6 WORKING OPERATIONS

GENERAL INFORMATION

Display brightness 6-1
Maximum throttle/Cold start idle 6-3
Brake enabled idle 6-5
Throttle sensitivity 6-7
Regeneration inhibit 6-8
Oil life reset 6-10

LOADER OPERATIONS

Personal safety 6-12
Job layout 6-13
Detent position for 4 in 1 bucket control switch 6-14
Loader digging force 6-17
Bucket level, position and depth indicators 6-18
Return to dig 6-20
Lifting with the loader 6-22
Changing loader attachments 6-22

THREE POINT HITCH

General safety and precautions 6-25
Machine and attachments 6-26
Working operations 6-27

7 MAINTENANCE

GENERAL INFORMATION

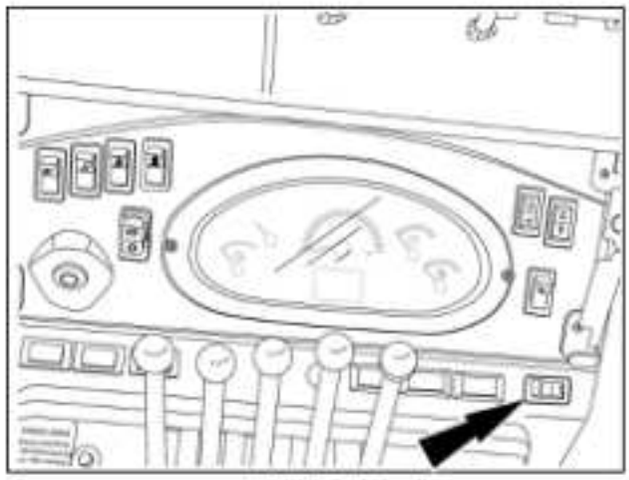
Safety rules 7-1
General safety before you service 7-2
Hour meter 7-2
Support strut for loader lift arm 7-3
Hood latch 7-5
Fire extinguisher 7-6
Battery access and care 7-7
Welding on the machine 7-9
Fuses and relays 7-11
Definition of fuse, relay and diode icons 7-15
Diagnostic/service tool port — Diagnostic service tool port 7-19
Heater coolant shutoff valve 7-19
Fluid capacities and lubricant specifications 7-20
Consumables 7-21

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publicati... Order the manual at mid-west-tech.com >

Rear hitch controls

Three point hitch mode control switch, if equipped

This is a three position rocker switch. It is recommended when operating the three point hitch lift circuit in the laser mode that the Flow Control Regulator be at the **11 l/min** (**3 US gpm**) setting.



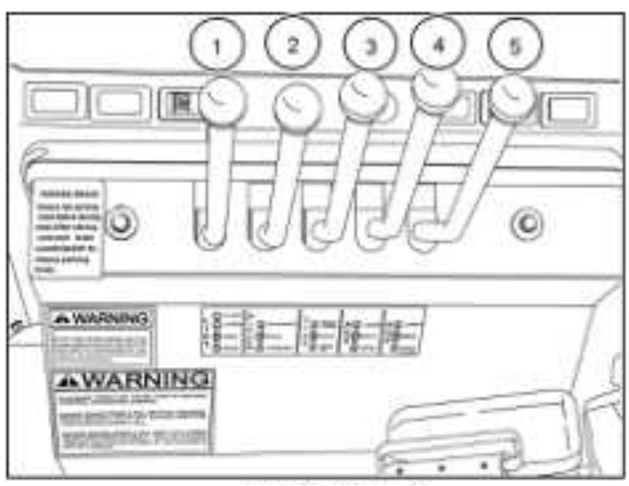
RAPH12JTL002AA 1

A. **LASER** mode - Push the front of the rocker switch to put the three point hitch lift circuit in the Laser mode. In this mode the laser controls the lift circuit. Use of the lift control lever will override the laser mode.

B. **FLOAT UP** mode - Put the rocker switch the center position to put the three point hitch lift circuit in the Float Up mode. Position the box scraper at the desired position. Move the rocker switch to Float Up. Move the lift control to the float position. In this mode the three point hitch will not go any lower but will float up as required and then return to the original position.

C. **NORM** mode - Push the rear of the rocker switch to put the three point hitch lift circuit in the Normal mode. In this mode the three point hitch cannot be lowered when the lift control is in the neutral position, or if the key switch is in the OFF position.

Three point hitch control levers, if equipped



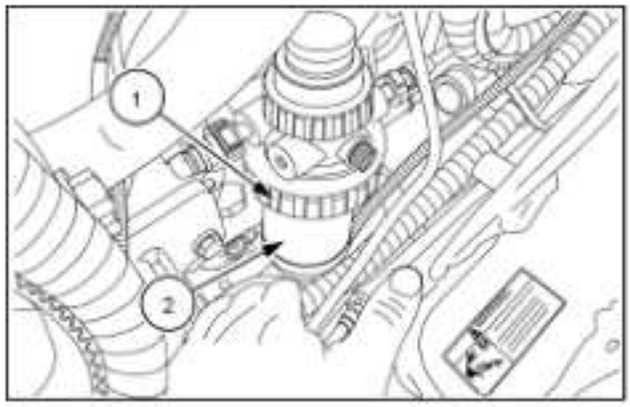
RAPH12JTL002AA 2

1. **LIFT** - Controls the height of the rear attachment.
2. **PITCH** - Controls the front and rear pitch of the attachment.
3. **TILT** - Controls the tilt on the right side of the attachment.
4. **AUX** - Controls auxiliary functions or the optional Left Tilt of the attachment.

   NOTE: *If the machine is equipped with Optional Left Tilt the first auxiliary control lever is the Left Hand Tilt and the second auxiliary control lever is the Scarifier. If the machine is not equipped with Optional Left Tilt the first auxiliary control lever is the Scarifier.*
5. **AUX** - Controls auxiliary functions or the Scarifier when the machine is equipped with the optional Left Tilt function.

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publicati... Order the manual at mid-west-tech.com >

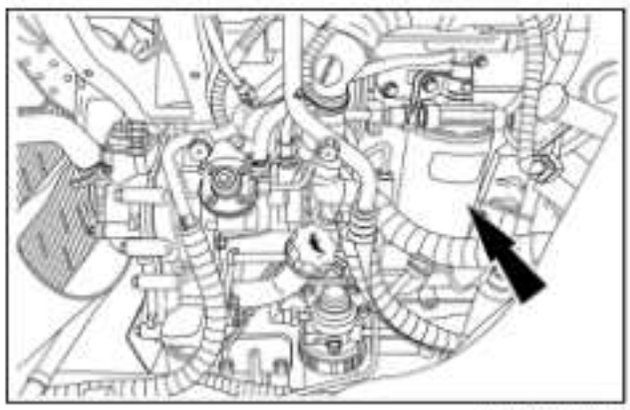
5. Remove the black collar **(1)** and the filter **(2)**. Use a filter removal tool, if necessary.
6. Apply clean engine oil to the new fuel filter seal.



RAIL11TLB000BAA 4

NOTICE: *Never use a filter removal tool to install a new filter.*

7. Install the new filter.
8. Install the black collar and turn until it snaps into place.
9. Continue to tighten the filter and additional 1/2 to 3/4 turn.
10. Install the wire connector. You should hear it click into position.
11. Clean the area around the primary fuel filter of dirt and debris.
12. Turn the primary filter counter-clockwise to remove. Use a filter removal tool, if necessary.
13. Apply clean engine oil to the new primary filter seal.
14. Turn the new primary filter clockwise onto the filter head until the filter gasket makes contact with the filter body.
15. Continue to tighten the primary filter and additional 1/2 to 3/4 turn.



RAIL11TLB000BAA 5

16. Tighten the fuel tank cap.
17. Dispose of the filters and collected fluid in accordance with local, regional, and federal regulations.

NOTICE: *Air in the fuel system causes excessive engine cranking before the engine starts. It is crucial that all air be removed from the system.*

18. **⚠ WARNING**

Pressurized system!
Only use the bleed screw to bleed air from the fuel system. DO NOT loosen the fuel or injector lines to bleed air. Injury or damage can occur. Fuel or injector lines are under very high pressure.
Failure to comply could result in death or serious injury.

W0285A

Bleed air from the system. For detailed instructions, refer to page **7-91**.

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publicati... Order the manual at mid-west-tech.com >

General specification - Biodiesel fuels - Biodiesel fuels

Biodiesel usage in NEW HOLLAND CONSTRUCTION products

Introduction to Fatty Acid Methyl Ester (FAME) biodiesel

FAME biodiesel, called biodiesel fuel in the following section, consists of a family of fuels derived from vegetable oils treated with methyl esters.

There are two main biodiesel fuel types: Rapeseed Methyl Ester (RME) and Soybean Methyl Ester (SME). RME is a blend of rapeseed and sunflower methyl ester, and is the preferred crop in Europe. SME is the preferred crop in the United States.

Biodiesel fuel is a renewable alternative fuel source. Its use and development is promoted worldwide, especially in Europe and in the United States.

NOTICE: *Your emissions control system is compatible with up to* ***20 %*** *biodiesel fuel (B20). Be aware that the use of biodiesel fuel that does not comply with the standards mentioned in this section could lead to severe damage to the engine, fuel system or aftertreatment system of your machine. The use of non-approved fuels may void NEW HOLLAND CONSTRUCTION Warranty coverage.*

Biodiesel fuel can be used to run diesel engines as pure biodiesel fuel or when blended with standard diesel fuel:

- B5: indicates the blend of **5 %** biodiesel and **95 %** diesel fuels.
- B7: indicates the blend of **7 %** biodiesel and **93 %** diesel fuels.
- B20: indicates the blend of **20 %** biodiesel and **80 %** diesel fuels.
- B100: indicates pure biodiesel, or **100 %** biodiesel fuel. Do not use.

Biodiesel fuel has several positive features in comparison with diesel fuel:

- Biodiesel fuel adds lubricity to the fuel, which is beneficial in many circumstances, particularly as sulfur and aromatics are removed from the fuel.
- Biodiesel has a greater cetane number and burns cleaner.
- Biodiesel produces less particulate matter and reduces smoke emissions.
- Biodiesel is fully biodegradable and non-toxic.

Diesel and biodiesel fuel specifications

Tier 4a diesel fuel specifications are covered by the following:

- **ASTM D975-10**, Standard Specification for Diesel Fuel Oils. (15 ppm sulfur maximum.)

Biodiesel blends are covered by:

- United States Diesel Fuel Specification **ASTM D6751-09A** allows up to **5 %** biodiesel since 2009. United States fuel suppliers are allowed to use up to **5 %** biodiesel fuel (B5) to supply the network.
- United States Biodiesel Fuel Specification **ASTM D7467-09A** provides specifications for diesel and biodiesel blends from B5 to B20.

Pure biodiesel (B100) specification is covered by the following requirements:

- **ASTM D6751-09A** - Standard specification for biodiesel fuel blend stock (B100) for middle distillate fuels.

  NOTE: ASTM D6751 *specification has been updated to improve the quality of biodiesel in the market place.*

Before raw oil can be converted into usable biodiesel fuel, it must undergo transesterification to remove glycerides. During the transesterification process, the oil reacts with an alcohol to separate the glycerine from the fat or vegetable oil. This process leaves behind two products: methyl ester (the chemical name for biodiesel) and glycerine (a byproduct usually sold for use in soaps or other products).

NOTICE: *Biodiesel fuels approved for use in the NEW HOLLAND CONSTRUCTION equipment must be transesterified and comply with the North America Standard* ***ASTM D6751****.*

NOTICE: *Cold Pressed Biodiesel, Cold Pressed Oil, Straight Vegetable Oil (SVO), or more generally unrefined vegetable oils used as motor fuel, are fuels that are normally made from Rapeseed oil or similar high oil content crops. These kinds of fuel are not transesterified, so they do not fulfil the* ***ASTM D6751*** *requirements. There is no recognized quality standard available for these types of fuel. Therefore the use of Cold Pressed Biodiesel, Cold Pressed Oil, Straight Vegetable Oil (SVO), or more generally unrefined vegetable oils used as motor fuel are NOT APPROVED at any blend in any NEW HOLLAND CONSTRUCTION product.*

NOTICE: *Any engine and fuel injection equipment fitted to a NEW HOLLAND CONSTRUCTION vehicle found to have run with any blend of NON-APPROVED fuel (fuel not fulfilling the specification described in the requirement* ***ASTM D6751****) will no longer be covered for Warranty by NEW HOLLAND CONSTRUCTION.*

Biodiesel fuel usage conditions

You must stringently follow the biodiesel fuel usage conditions. Incorrect application of the biodiesel fuel usage conditions could lead to severe damage to the engine, fuel injection equipment and aftertreatment system.

The main concerns related to operation with biodiesel fuels are:

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publicati... Order the manual at mid-west-tech.com >

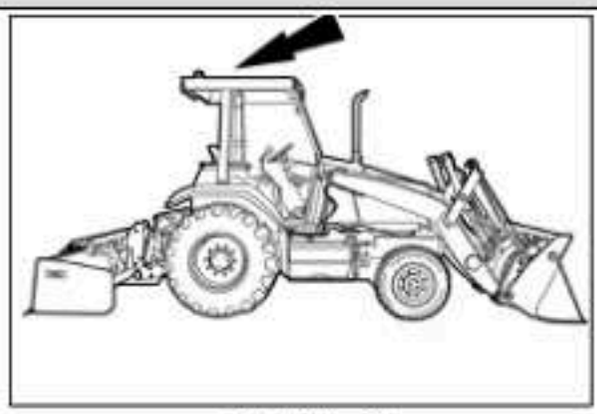
Do not modify ROPS or FOPS

WARNING
Do not modify or repair ROPS or FOPS in any manner. Failure to comply could result in death or serious injury.
Quantity: 1
English 383972A1
Spanish 389729A1
French Canadian 389730A1



383972A1 31

(13) Located on top of ROPS canopy/cab frame


RAPH12UTL0136AA 32

Parking brake

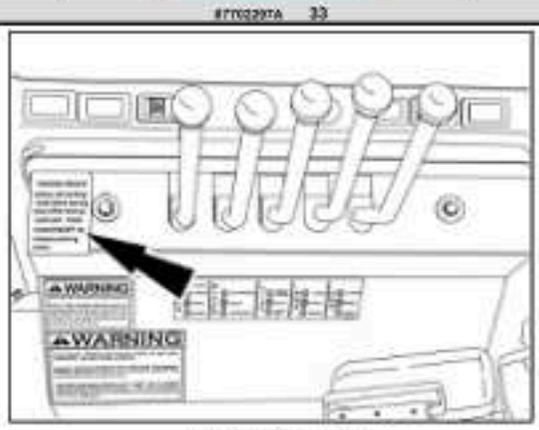
IMPORTANT
Always set parking brake before leaving seat. After startup, cycle park brake switch ON/OFF to release parking brake.

Quantity: 1
English 87702297
Spanish 87708227
French Canadian 87708242



87702297A 33

(14) Located on the right hand console.



RAPH12UTL0622AA 34

MidWestTech | New Holland U80C Tier 4 Tractor Loader Operator's Manual | Publicati... Order the manual at mid-west-tech.com >