

SERVICE MANUAL

DI80C Tier 2 Crawler Dozer

PIN NHC108500 and above

Part number 48048573

1st edition English
April 2017





SERVICE MANUAL

**D180C Bulldozer (BD) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -],
D180C Bulldozer (BD) Blade, Long Track (LT) - Tier 2 [NHC108500 -], D180C
Bulldozer (BD) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500
-], D180C Power Angle Tilt (PAT) Blade, Extra Long Track (XLT) - Tier 2
[NHC108500 -], D180C Power Angle Tilt (PAT) Blade, Long Track (LT) - Tier 2
[NHC108500 -], D180C Power Angle Tilt (PAT) Blade, Low Ground Pressure
(LGP) - Tier 2 [NHC108500 -]**

Link Product / Engine

Product	Market Product	Engine
D180C Power Angle Tilt (PAT) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Middle East Africa	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Australia New Zealand	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Latin America	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Asia Pacific	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Australia New Zealand	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Asia Pacific	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Middle East Africa	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Long Track (LT) - Tier 2 [NHC108500 -]	Latin America	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Middle East Africa	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Australia New Zealand	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Asia Pacific	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Latin America	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Latin America	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Middle East Africa	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Australia New Zealand	F4HFA613N*E002
D180C Power Angle Tilt (PAT) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Asia Pacific	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Middle East Africa	F4HFA613N*E002

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>

Product	Market Product	Engine
D180C Bulldozer (BD) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Australia New Zealand	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Latin America	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -]	Asia Pacific	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Australia New Zealand	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Middle East Africa	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Asia Pacific	F4HFA613N*E002
D180C Bulldozer (BD) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]	Latin America	F4HFA613N*E002

Contents

INTRODUCTION

Engine.....	10
[10.001] Engine and crankcase	10.1
[10.216] Fuel tanks	10.2
[10.206] Fuel filters	10.3
[10.202] Air cleaners and lines	10.4
[10.250] Turbocharger and lines.....	10.5
[10.254] Intake and exhaust manifolds and muffler	10.6
[10.400] Engine cooling system	10.7
[10.414] Fan and drive	10.8
[10.310] Aftercooler.....	10.9
[10.304] Engine lubrication system.....	10.10
Hydrostatic drive.....	29
[29.218] Pump and motor components.....	29.1
Brakes and controls	33
[33.110] Parking brake or parking lock	33.1
[33.202] Hydraulic service brakes	33.2
Hydraulic systems.....	35
[35.300] Reservoir, cooler, and filters.....	35.1
[35.104] Fixed displacement pump	35.2
[35.106] Variable displacement pump	35.3
[35.105] Charge pump.....	35.4
[35.359] Main control valve.....	35.5
[35.741] Dozer blade cylinders	35.6
[35.525] Auxiliary hydraulic valves and lines	35.7
[35.752] Hydraulic fan drive cooling system.....	35.8

[35.000] Hydraulic systems	35.9
Frames and ballasting	39
[39.100] Frame	39.1
Tracks and track suspension	48
[48.130] Track frame and driving wheels	48.1
[48.100] Tracks	48.2
[48.134] Track tension units	48.3
[48.138] Track rollers	48.4
[48.AAA] Tracks and track suspension generic sub-group	48.5
[48.140] Dropbox and final drive	48.6
Cab climate control	50
[50.100] Heating	50.1
[50.104] Ventilation	50.2
[50.200] Air conditioning	50.3
Electrical systems	55
[55.000] Electrical system	55.1
[55.011] Fuel tank system	55.2
[55.015] Engine control system	55.3
[55.030] Service brake electrical system	55.4
[55.050] Heating, Ventilation, and Air-Conditioning (HVAC) control system	55.5
[55.100] Harnesses and connectors	55.6
[55.201] Engine starting system	55.7
[55.202] Cold start aid	55.8
[55.301] Alternator	55.9
[55.302] Battery	55.10
[55.408] Warning indicators, alarms, and instruments	55.11
[55.512] Cab controls	55.12
[55.518] Wiper and washer system	55.13

[55.DTC] FAULT CODES.....	55.14
Dozer blade and arm.....	86
[86.110] Dozer blade	86.1
[86.124] Dozer pushbeams and struts	86.2
Tools	89
[89.128] Ripper assembly	89.1
Platform, cab, bodywork, and decals.....	90
[90.150] Cab.....	90.1
[90.114] Operator protections	90.2
[90.124] Pneumatically-adjusted operator seat.....	90.3
[90.100] Engine hood and panels	90.4



INTRODUCTION

Foreword - Important notice regarding equipment servicing

D180C

ANZ --- APAC --- LA --- MEA

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 CONSTRUCTION Sales and Service Networks.

Safety rules

D180C

ANZ --- APAC --- LA --- MEA


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 - Personal safety

D180C

ANZ --- APAC --- LA --- MEA

General maintenance safety

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

Service the machine on a firm, level surface.

Install guards and shields after you service the machine.

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

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

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

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 the equipment is securely supported.

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

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

Stop the engine, remove the key, and relieve pressure before you connect or disconnect fluid lines.

Stop the engine and remove the key before you connect or disconnect electrical connections.

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

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

The engine, transmission, exhaust components, and hydraulic lines may become hot during operation. Take care when you service such components. Allow surfaces to cool before you handle or disconnect hot components. Wear protective equipment when appropriate.

When welding, follow the instructions in the manual. Always disconnect the battery before you weld on the machine. Always wash your hands after you handle battery components.

General battery safety

Always wear eye protection when you work with batteries.

Do not create sparks or have open flame near a battery.

Ventilate the area when you charge a battery or use a battery in an enclosed area.

Disconnect the negative (-) terminal first and reconnect the negative (-) terminal last.

When you weld on the machine, disconnect both terminals of the battery.

Do not weld, grind, or smoke near a battery.

When you use auxiliary batteries or connect jumper cables to start the engine, use the procedure shown in the operator's manual. Do not short across terminals.

Follow the manufacturer's instructions when you store and handle batteries.

Battery post, terminals, and related accessories contain lead and lead compounds. Wash hands after handling. This is a California Proposition 65 warning.

Battery acid causes burns. Batteries contain sulfuric acid. Avoid contact with skin, eyes, or clothing. Antidote (external): Flush with water. Antidote (eyes): flush with water for 15 minutes and seek medical attention immediately. Antidote (internal): Drink large quantities of water or milk. Do not induce vomiting. Seek medical attention immediately.

Keep out of reach of children and other unauthorized persons.

Air-conditioning system

The air-conditioning system is under high pressure. Do not disconnect any lines. The release of high pressure can cause serious injury.

The air-conditioning system contains gases that are harmful to the environment when released into the atmosphere. Do not attempt to service or repair the system.

Only trained service technicians can service, repair, or recharge the air-conditioning system.

Personal Protective Equipment (PPE)

Wear Personal Protective Equipment (PPE) such as hard hat, eye protection, heavy gloves, hearing protection, protective clothing, etc.

Do Not Operate tag

Before you start servicing the machine, attach a 'Do Not Operate' warning tag to the machine in an area that will be visible.



SERVICE MANUAL

Engine

D180C Bulldozer (BD) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -], D180C Bulldozer (BD) Blade, Long Track (LT) - Tier 2 [NHC108500 -], D180C Bulldozer (BD) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -], D180C Power Angle Tilt (PAT) Blade, Extra Long Track (XLT) - Tier 2 [NHC108500 -], D180C Power Angle Tilt (PAT) Blade, Long Track (LT) - Tier 2 [NHC108500 -], D180C Power Angle Tilt (PAT) Blade, Low Ground Pressure (LGP) - Tier 2 [NHC108500 -]

Engine - Remove

D180C

ANZ --- APAC --- LA --- MEA

⚠ WARNING

Heavy parts!
Support designated component(s) with adequate lifting equipment.
Failure to comply could result in death or serious injury.

W1024A

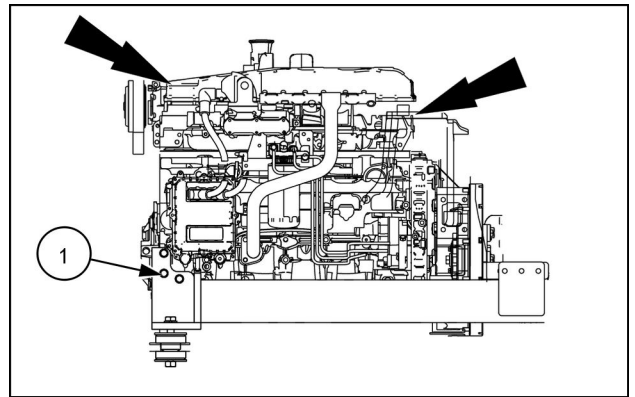
Prior operation:

Frame - Remove (39.100)

NOTICE: The engine weighs approximately **631 kg (1391 lb)**. Use appropriate lifting equipment to prevent personal injury or property damage.

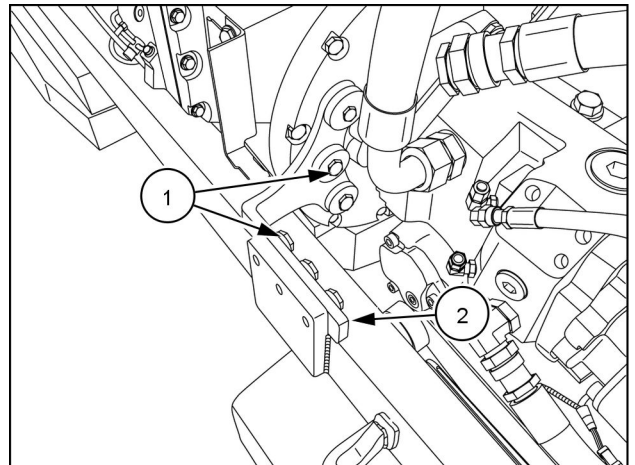
NOTICE: The engine must be balanced as shown, or personal injury or property damage will occur.

1. Attach an appropriate lifting device to the engine lift points.
2. Support the front of the hydraulic pump stack with an appropriate lifting device or stand.
3. Remove the bolts and washers **(1)** from the right front engine-to-frame cradle mount and the left front engine-to-frame cradle mount.



RAIL14DOZ0447AA 1

4. Remove the mounting bolts and washers **(1)** from the left side engine-to-frame cradle mounting bracket **(2)**. Remove the mounting bracket.



RAIL14DOZ0209AA 2

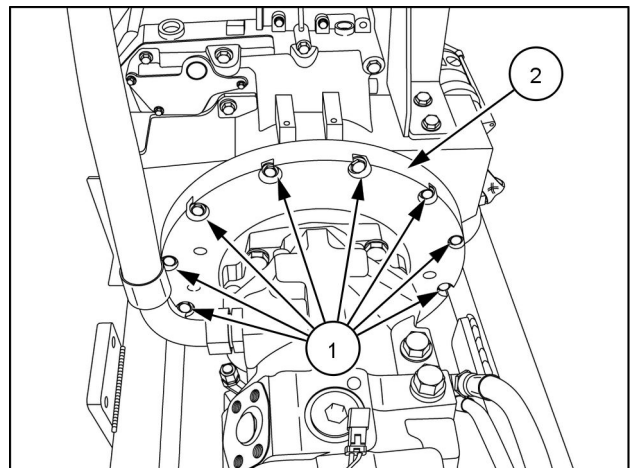
5. Remove the mounting bolts and washers (1) from the right side engine-to-frame cradle mounting bracket (2). Remove the bracket.



RAIL14DOZ0202AA 3

6. Remove the mounting bolts and washers (1) from the engine-to-pump stack adapter plate (2).
7. Slowly move the engine forward to separate it from the hydrostatic pump drive stack, and remove the engine from the frame cradle.

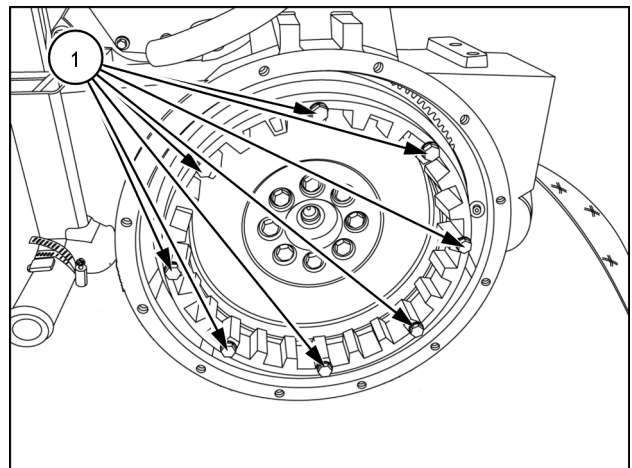
NOTE: Pull the engine straight forward horizontally by hand only from the hydraulic pump stack until the rubber coupler teeth clear the mating ring attached to the flywheel.



RAIL14DOZ0203AA 4

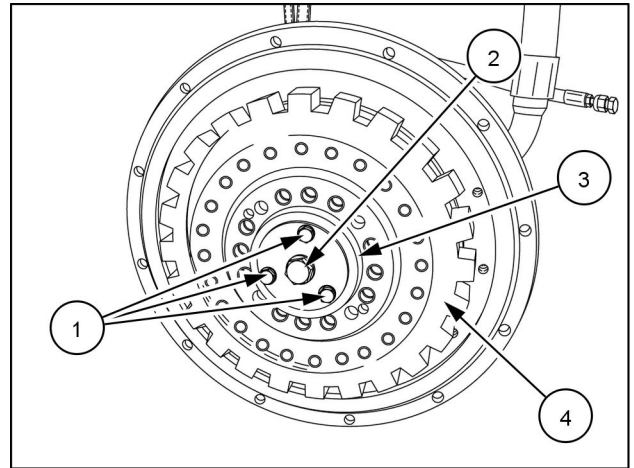
8. Remove the eight bolts (1) that secure the tandem pump flexible coupling mating ring to the engine flywheel and remove the mating ring.

NOTICE: Replace the flexible coupler when either the engine or hydrostatic pump stack are removed from the machine. The coupler is a flexible, rubber based component that could be damaged by excessive heat, excessive shock loading, unintended vibrations, or if soaked in oil. The coupler is in place to protect the integrity of the engine and pumps. Damage to coupler may not be visible.



RAIL16DOZ0008AA 5

9. Remove the mounting bolts (1) and (2) from the left hydrostatic drive pump hub and spline (3).
10. Remove the flexible coupling drive gear (4) from the hydrostatic drive pump hub and spline.



RAIL14DOZ0283AA 6

Next operation:
Engine - Install (10.001)



Suggest:

If the above button click is invalid.

Please download this document

first, and then click the above link

to download the complete manual.

Thank you so much for reading

Engine - Install

D180C

ANZ --- APAC --- LA --- MEA

⚠ WARNING

Heavy parts!
Support designated component(s) with adequate lifting equipment.
Failure to comply could result in death or serious injury.

W1024A

Prior operation:

Engine - Remove (10.001)

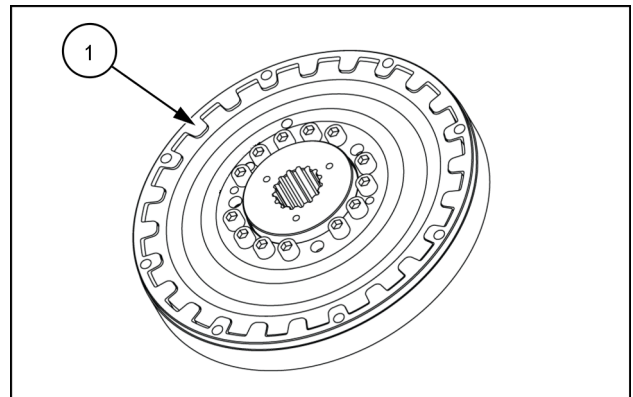
Prior operation:

Clean threads of oil, dirt, and preservatives prior to assembly.

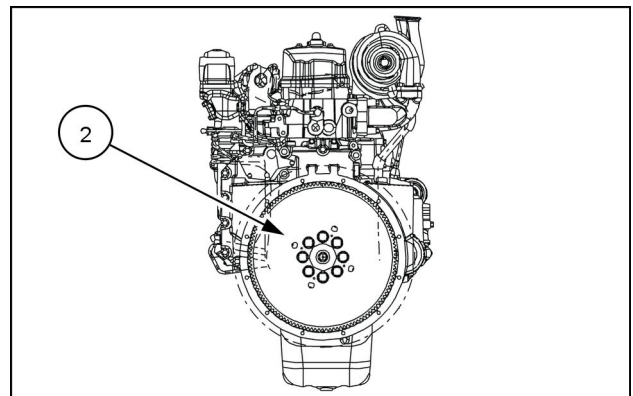
NOTICE: Replace the flexible coupler when either the engine or hydrostatic pump stack are removed from the machine. The coupler is a flexible, rubber based component that could be damaged by excessive heat, excessive shock loading, or unintended vibrations. The coupler is in place to protect the integrity of the engine and pumps. Damage to coupler may not be visible.

NOTE: Clean and inspect all hardware that is to be reused.

1. Apply **LOCTITE® 242®** to the eight bolts, and mount the new tandem pump flexible coupling mating ring (1) to the engine flywheel (2).



RAIL16DOZ0005AA 1



RAIL16DOZ0004AA 2

<https://www.ebooklibonline.com>

Hello dear friend!

Thank you very much for reading.

Enter the link into your browser.

The full manual is available for immediate download.

<https://www.ebooklibonline.com>