# SERVICE MANUAL

## D180C

Crawler Dozer

Part number 48037327A
2nd edition English
June 2018

NEW HOLLAND CONSTRUCTION

# SERVICE MANUAL

**D180C With cab, Tier 2, Power Angle Tilt (PAT) Blade, Made in Brazil**
**D180C With cab, Tier 2, Bulldozer (BD) Blade, Made in Brazil**
**D180C With cab, Tier 3, Power Angle Tilt (PAT) Blade, Made in Brazil**
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48037327A 28/05/2018

EN

# Link Product / Engine

| Product | Market Product | Engine |
|---|---|---|
| D180C Com cabine, Tier 2, lâmina Power Angle Tilt (PAT), feito no Brasil | Latin America | F4HFA613N*E002 |
| D180C Com cabine, Tier 2, lâmina Bulldozer (BD), feito no Brasil | Latin America | F4HFA613N*E002 |

# Contents

# INTRODUCTION

# Foreword - Important notice regarding equipment servicing

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.

# Foreword - How to use and navigate through this manual

| | |
|---|---|
| D180C With cab, Tier 2, Bulldozer (BD) Blade, Made in Brazil | LA |
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This manual has been produced by a new technical information system. This new system is designed to deliver technical information electronically through web delivery (eTIM), DVD, and paper manuals. A coding system called SAP has been developed to link the technical information to other Product Support functions, e.g., Warranty.

Technical information is written to support the maintenance and service of the functions or systems on a customer's machine. When a customer has a concern on their machine it is usually because a function or system on their machine is not working at all, is not working efficiently, or is not responding correctly to their commands. When you refer to the technical information in this manual to resolve that customer's concern, you will find all the information classified using the SAP coding, according to the functions or systems on that machine. Once you have located the technical information for that function or system, you will then find all the mechanical, electrical or hydraulic devices, components, assemblies, and sub assemblies for that function or system. You will also find all the types of information that have been written for that function or system: the technical data (specifications), the functional data (how it works), the diagnostic data (fault codes and troubleshooting), and the service data (remove, install adjust, etc.).

By integrating SAP coding into technical information, you will be able to search and retrieve just the right piece of technical information you need to resolve that customer's concern on his machine. This is made possible by attaching 3 categories to each piece of technical information during the authoring process.

The first category is the Location, the second category is the Information Type and the third category is the Product:

- LOCATION - the component or function on the machine, that the piece of technical information is going to describe (e.g., Fuel tank).
- INFORMATION TYPE - the piece of technical information that has been written for a particular component or function on the machine (e.g., Capacity would be a type of Technical Data describing the amount of fuel held by the fuel tank).
- PRODUCT - the model for which the piece of technical information is written.

Every piece of technical information will have those three categories attached to it. You will be able to use any combination of those categories to find the right piece of technical information you need to resolve that customer's concern on their machine.

That information could be:

- the procedure for how to remove the cylinder head
- a table of specifications for a hydraulic pump
- a fault code
- a troubleshooting table
- a special tool

## Manual content

This manual is divided into Sections. Each Section is then divided into Chapters. Contents pages are included at the beginning of the manual, then inside every Section and inside every Chapter. An alphabetical Index is included at the end of each Chapter. Page number references are included for every piece of technical information listed in the Chapter Contents or Chapter Index.

Each Chapter is divided into four Information types:

- Technical Data (specifications) for all the mechanical, electrical or hydraulic devices, components, assemblies or sub-assemblies.
- Functional Data (how it works) for all the mechanical, electrical or hydraulic devices, components, assemblies or sub-assemblies.
- Diagnostic Data (fault codes, electrical and hydraulic troubleshooting) for all the mechanical, electrical or hydraulic devices, components, assemblies or sub-assemblies.
- Service Data (remove disassemble, assemble, install) for all the mechanical, electrical or hydraulic devices, components, assemblies or sub-assemblies.

## Sections

Sections are grouped according to the main functions or a systems on the machine. Each Section is identified by a number (00, 35, 55, etc.). The Sections included in the manual will depend on the type and function of the machine that the manual is written for. Each Section has a Contents page listed in alphabetic/numeric order. This table illustrates which Sections could be included in a manual for a particular product.

| | PRODUCT | | | | |
|---|---|---|---|---|---|
| | Tractors | | | | |
| | | Vehicles with working arms: backhoes, excavators, skid steers, …. | | | |
| | | | Combines, forage harvesters, balers, …. | | |
| | | | | Seeding, planting, floating, spraying equipment, …. | |
| SECTION | | | | | Mounted equipment and tools, …. |
| 00 - Maintenance | X | X | X | X | X |
| 05 - Machine completion and equipment | X | X | X | X | X |
| 10 - Engine | X | X | X | X | |
| 14 - Main gearbox and drive | X | X | X | X | |
| 18 - Clutch | X | X | X | | |
| 21 - Transmission | X | X | X | X | |
| 23 - Four wheel drive (4WD) system | X | X | X | X | |
| 25 - Front axle system | X | X | X | X | |
| 27 - Rear axle system | X | X | X | X | |
| 29 - Hydrostatic drive | X | X | X | X | |
| 31 - Power Take-Off (PTO) | X | | X | | |
| 33 - Brakes and controls | X | X | X | X | |
| 35 - Hydraulic systems | X | X | X | X | |
| 36 - Pneumatic system | X | X | X | X | |
| 37 - Hitches, drawbars and implement couplings | X | | X | X | |
| 39 - Frames and ballasting | X | X | X | X | X |
| 41 - Steering | X | X | X | X | |
| 44 - Wheels | X | X | X | X | |
| 46 - Steering clutches | | | | | |
| 48 - Tracks and track suspension | X | X | X | | |
| 50 - Cab climate control | X | X | X | X | |
| 55 - Electrical systems | X | X | X | X | X |
| 56 - Grape harvester shaking | | | | | |
| 58 - Attachments/headers | | | X | | |
| 60 - Product feeding | | | X | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 61 - Metering system | | | | X | | |
| 62 - Pressing - Bale formation | | | X | | | |
| 63 - Chemical applicators | | | | X | | |
| 64 - Chopping | | | X | | | |
| 66 - Threshing | | | X | | | |
| 68 - Tying/Wrapping/Twisting | | | X | | | |
| 69 - Bale wagons | | | | | | |
| 70 - Ejection | | | X | | | |
| 71 - Lubrication system | X | X | X | X | X | |
| 72 - Separation | | | X | | | |
| 73 - Residue handling | | | X | | | |
| 74 - Cleaning | | | X | | | |
| 75 - Soil preparation/Finishing | | | | | | |
| 76 - Secondary cleaning / Destemmer | | | | | | |
| 77 - Seeding | | | | X | | |
| 78 - Spraying | | | | X | | |
| 79 - Planting | | | | X | | |
| 80 - Crop storage / Unloading | | | X | | | |
| 82 - Front loader and bucket | X | X | | | | |
| 83 - Telescopic single arm | X | X | | | | |
| 84 - Booms, dippers and buckets | X | X | | | | |
| 86 - Dozer blade and arm | X | X | | | | |
| 88 - Accessories | X | X | X | X | X | |
| 89 - Tools | X | X | X | X | X | |
| 90 - Platform, cab, bodywork and decals | X | X | X | X | | |

# Product overview - (Machine Components)

| | |
|---|---|
| D180C With cab, Tier 2, Bulldozer (BD) Blade, Made in Brazil | LA |
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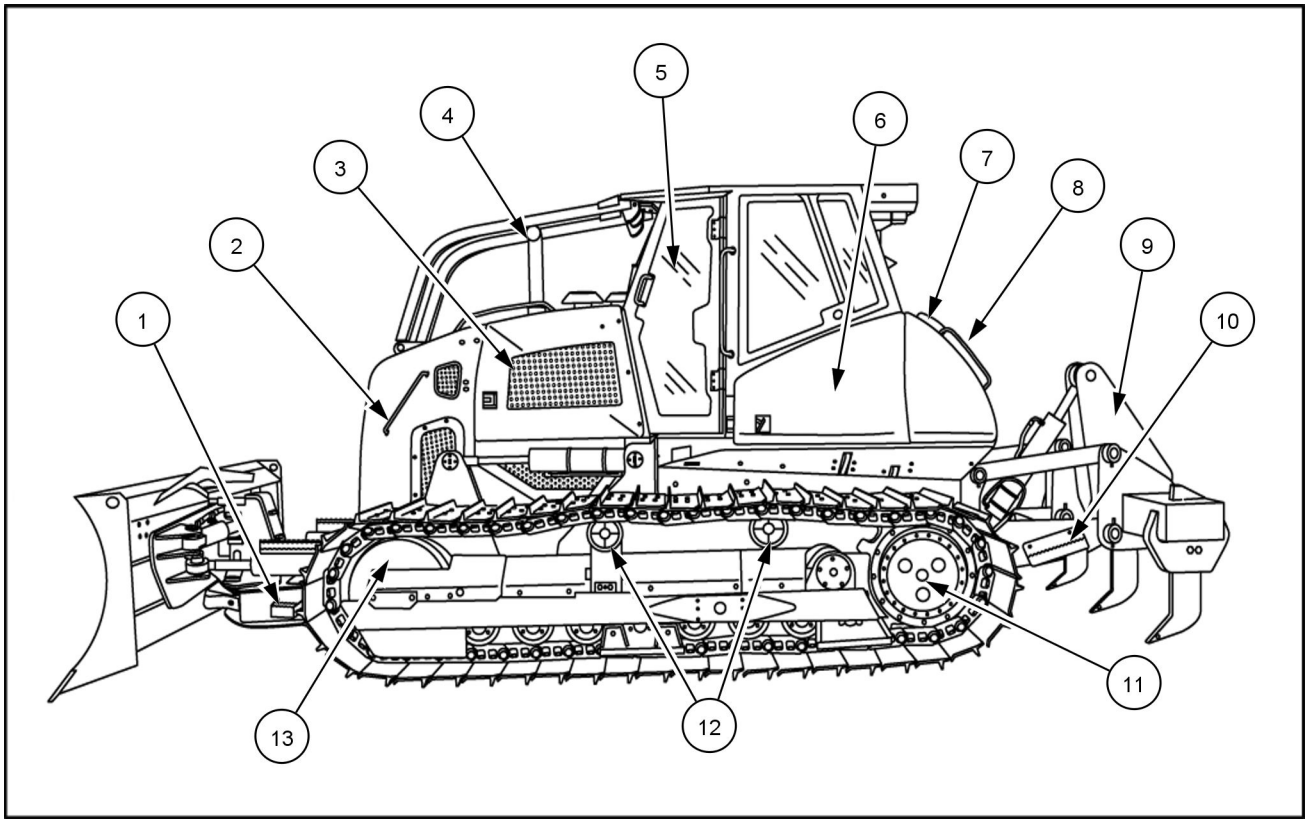
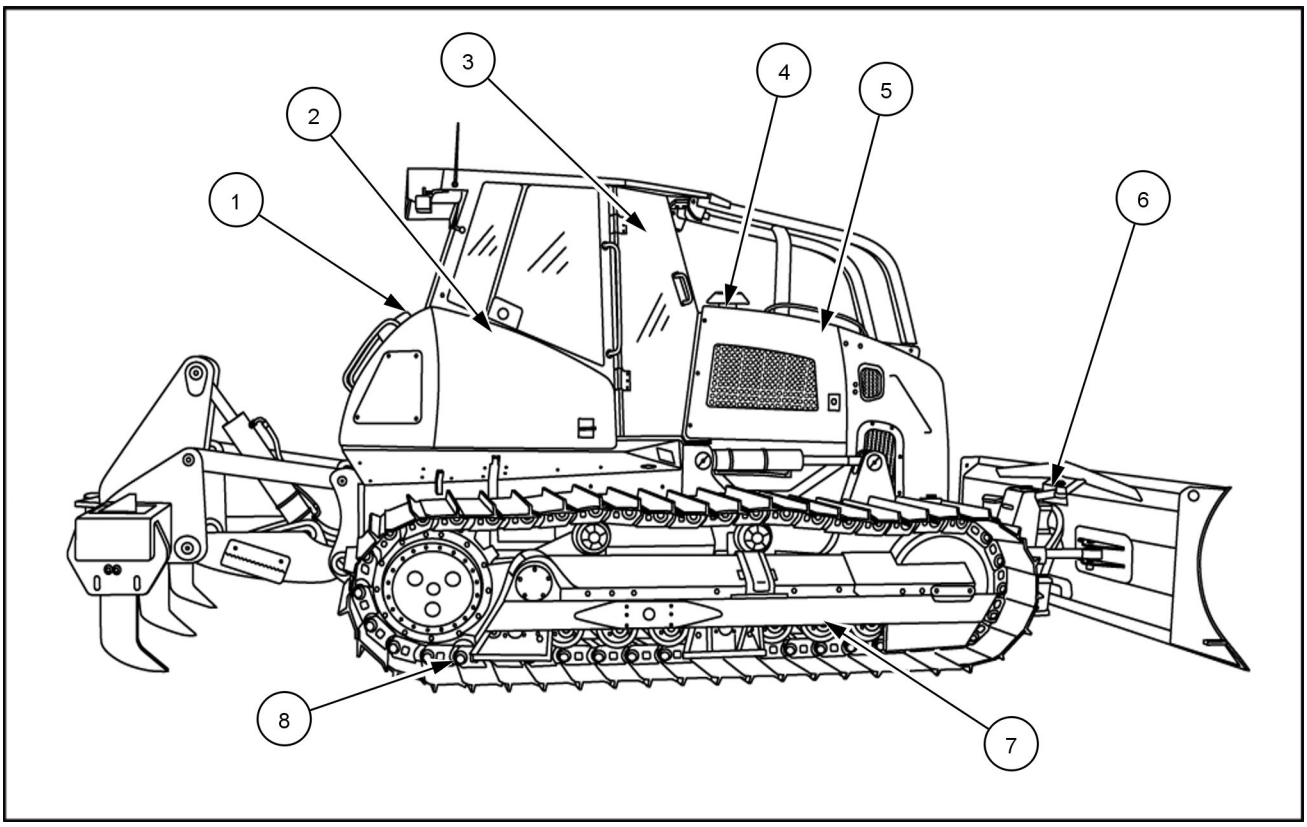



RAIL12DOZ0388FA 1

**(1)** Front step (if equipped)
**(2)** Front handhold
**(3)** Left front access door
**(4)** Exhaust muffler
**(5)** Left cab door
**(6)** Left rear access door
**(7)** Fuel reservoir
**(8)** Rear hand hold
**(9)** Ripper (if equipped)
**(10)** Ripper step (if equipped)
**(11)** Travel reducer
**(12)** Top track roller
**(13)** Track tensioner wheel




RAIL12DOZ0389FA 2

**(1)** Hydraulic Fluid Reservoir
**(2)** Right rear access door
**(3)** Right cab door
**(4)** Telematics system antenna (if equipped)
**(5)** Right front access door
**(6)** Blade tilt link
**(7)** Lower track roller
**(8)** Track links

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## Engine

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# Engine - Remove

**⚠ WARNING**

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

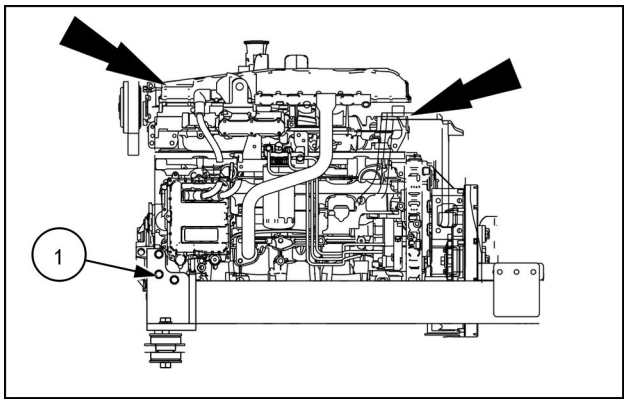
**W1024A**

**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.

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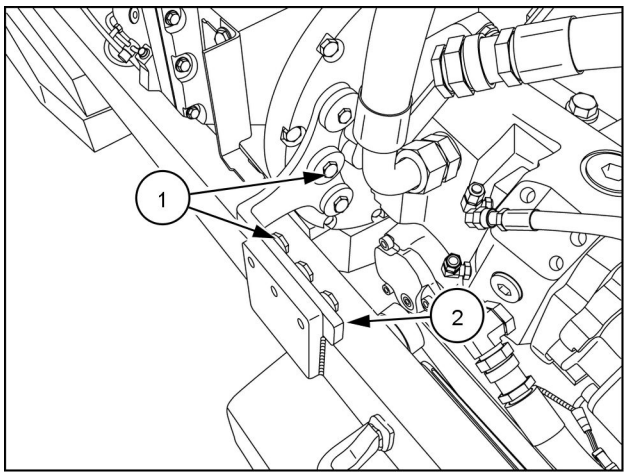
4. Remove the mounting bolts and washers **(1)** from the left side engine-to-frame cradle mounting bracket **(2)**. Remove the mounting bracket.

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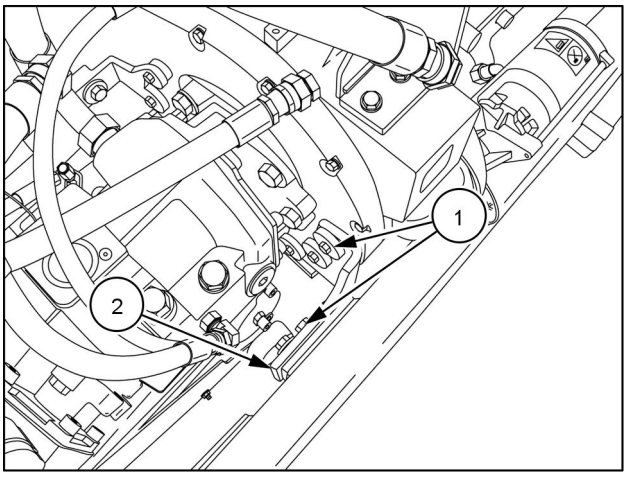
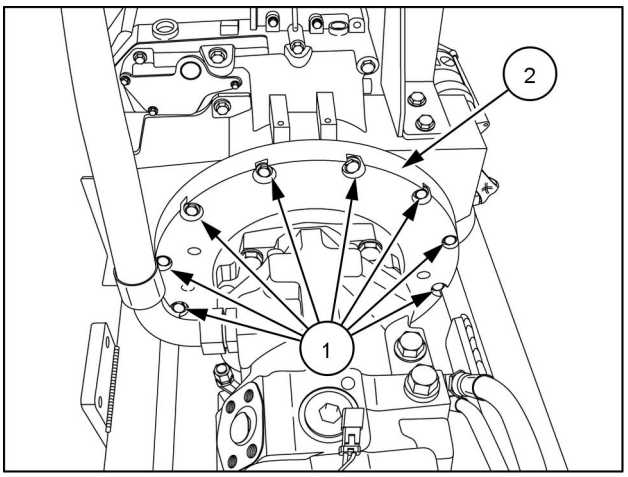
5. Remove the mounting bolts and washers **(1)** from the right side engine-to-frame cradle mounting bracket **(2)**. Remove the bracket.




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.

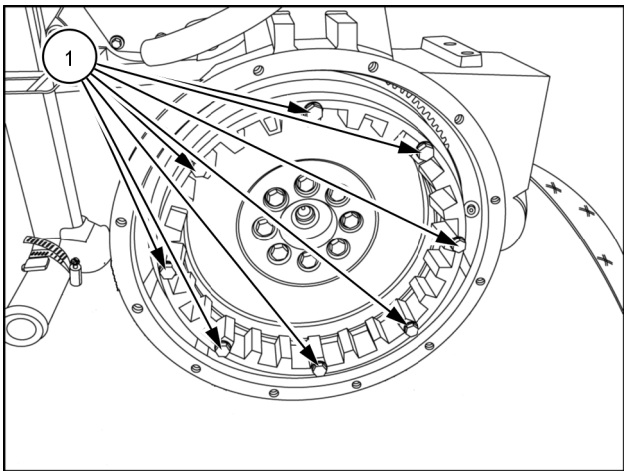
***NOTE:*** *Pull the engine straight forward horizontally by hand only from the hydraulic pump stack until the rubber coupler teeth clear the mating ring attached to the flywheel.*




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.

***NOTE:*** *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.*

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first, and then click the above link

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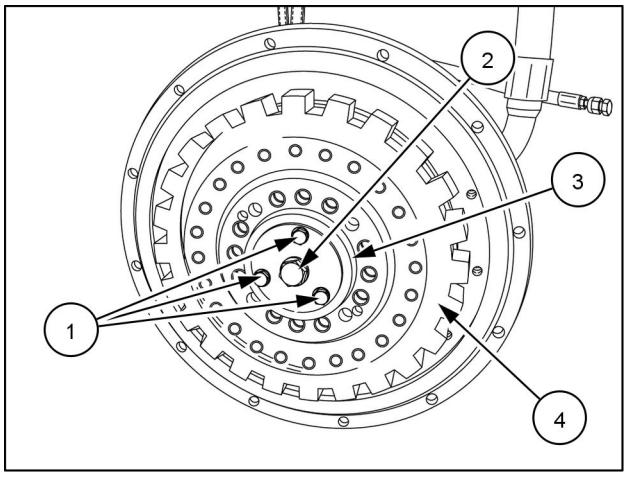
Thank you so much for reading

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)**