

# SERVICE MANUAL

**T4.55 / T4.65 / T4.75**

**PowerStar - Tractor**

*PIN ZDAH00008 and above*

Part number 47772169

English

September 2014





## **SERVICE MANUAL**

**T4.55 Powerstar™ without cab, Tier 4B (Final) [ZxAHxxxxx], T4.55 Powerstar™ with cab, Tier 4B (Final) [ZxAHxxxxx], T4.65 Powerstar™ without cab, Tier 4B (Final) [ZxAHxxxxx], T4.65 Powerstar™ with cab, Tier 4B (Final) [ZxAHxxxxx], T4.75 Powerstar™ without cab, Tier 4B (Final) [ZxAHxxxxx], T4.75 Powerstar™ with cab, Tier 4B (Final) [ZxAHxxxxx]**

## Link Product / Engine

Product	Market Product	Engine
T4.55 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Europe	F5DFL463C*F004
T4.55 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Australia New Zealand	F5DFL463C*F004
T4.55 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Asia Pacific	F5DFL463C*F004
T4.55 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Middle East Africa	F5DFL463C*F004
T4.55 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Europe	F5DFL463C*F004
T4.55 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Australia New Zealand	F5DFL463C*F004
T4.55 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Asia Pacific	F5DFL463C*F004
T4.55 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Middle East Africa	F5DFL463C*F004
T4.65 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Asia Pacific	F5DFL463B*F006
T4.65 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Middle East Africa	F5DFL463B*F006
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T4.65 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Asia Pacific	F5DFL463B*F006
T4.75 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Asia Pacific	F5DFL463A*F017
T4.75 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Europe	F5DFL463A*F017
T4.75 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Australia New Zealand	F5DFL463A*F017
T4.75 Powerstar™ senza cabina, Tier 4B (Finale) [ZxAHxxxxx]	Middle East Africa	F5DFL463A*F017
T4.75 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Europe	F5DFL463A*F017
T4.75 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Australia New Zealand	F5DFL463A*F017
T4.75 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Asia Pacific	F5DFL463A*F017
T4.75 Powerstar™ con cabina, Tier 4B (Finale) [ZxAHxxxxx]	Middle East Africa	F5DFL463A*F017

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# Contents

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## INTRODUCTION

<b>Engine</b> .....	<b>10</b>
[10.001] Engine and crankcase .....	10.1
[10.216] Fuel tanks .....	10.2
[10.501] Exhaust Gas Recirculation (EGR) - Diesel Particulate Filter (DPF) exhaust treatment .....	10.3
[10.414] Fan and drive .....	10.4
<b>Clutch</b> .....	<b>18</b>
[18.100] Clutch mechanical release control .....	18.1
[18.104] Clutch hydraulic release control.....	18.2
[18.110] Clutch and components .....	18.3
<b>Transmission</b> .....	<b>21</b>
[21.114] Mechanical transmission .....	21.1
[21.140] Mechanical transmission internal components.....	21.2
[21.112] Power shuttle transmission.....	21.3
[21.134] Power shuttle transmission external controls .....	21.4
[21.104] Power shuttle transmission lubrication system.....	21.5
[21.154] Power shuttle transmission internal components .....	21.6
[21.160] Creeper .....	21.7
[21.162] Reverser .....	21.8
[21.109] Transmission cooler and lines.....	21.9
<b>Four-Wheel Drive (4WD) system</b> .....	<b>23</b>
[23.202] Electro-hydraulic control .....	23.1
<b>Front axle system</b> .....	<b>25</b>
[25.100] Powered front axle .....	25.1
[25.102] Front bevel gear set and differential .....	25.2
[25.108] Final drive hub, steering knuckles, and shafts .....	25.3

[25.400] Non-powered front axle .....	25.4
<b>Rear axle system.....</b>	<b>27</b>
[27.100] Powered rear axle.....	27.1
[27.106] Rear bevel gear set and differential .....	27.2
[27.120] Planetary and final drives .....	27.3
<b>Power Take-Off (PTO).....</b>	<b>31</b>
[31.101] Rear mechanical control .....	31.1
[31.104] Rear electro-hydraulic control.....	31.2
[31.110] One-speed rear Power Take-Off (PTO) .....	31.3
[31.114] Two-speed rear Power Take-Off (PTO) .....	31.4
<b>Brakes and controls .....</b>	<b>33</b>
[33.202] Hydraulic service brakes .....	33.1
[33.110] Parking brake or parking lock .....	33.2
[33.220] Trailer brake hydraulic control.....	33.3
<b>Hydraulic systems.....</b>	<b>35</b>
[35.104] Fixed displacement pump.....	35.1
[35.204] Remote control valves .....	35.2
[35.114] Three-point hitch control valve .....	35.3
[35.116] Three-point hitch cylinder .....	35.4
[35.701] Front loader arm hydraulic system .....	35.5
[35.723] Front loader bucket hydraulic system .....	35.6
<b>Hitches, drawbars, and implement couplings.....</b>	<b>37</b>
[37.100] Drawbars and towing hitches .....	37.1
[37.110] Rear three-point hitch .....	37.2
<b>Steering.....</b>	<b>41</b>
[41.106] Tie rods.....	41.1
[41.206] Pump .....	41.2

[41.101] Steering control .....	41.3
[41.200] Hydraulic control components.....	41.4
[41.216] Cylinders .....	41.5
<b>Wheels .....</b>	<b>44</b>
[44.511] Front wheels.....	44.1
[44.520] Rear wheels .....	44.2
<b>Cab climate control .....</b>	<b>50</b>
[50.100] Heating .....	50.1
[50.104] Ventilation .....	50.2
[50.200] Air conditioning.....	50.3
<b>Electrical systems .....</b>	<b>55</b>
[55.100] Harnesses and connectors.....	55.1
[55.201] Engine starting system .....	55.2
[55.301] Alternator.....	55.3
[55.302] Battery.....	55.4
[55.640] Electronic modules .....	55.5
[55.048] Rear Power Take-Off (PTO) control system .....	55.6
[55.408] Warning indicators, alarms, and instruments .....	55.7
[55.DTC] FAULT CODES.....	55.8
<b>Front loader and bucket.....</b>	<b>82</b>
[82.100] Arm.....	82.1
[82.300] Bucket.....	82.2
[82.AAA] Front loader and bucket generic sub-group .....	82.3
<b>Platform, cab, bodywork, and decals .....</b>	<b>90</b>
[90.150] Cab.....	90.1
[90.151] Cab interior.....	90.2
[90.160] Cab interior trim and panels.....	90.3
[90.154] Cab doors and hatches .....	90.4

[90.110] Operator platform less cab ..... 90.5

[90.100] Engine hood and panels ..... 90.6



# INTRODUCTION

# Contents

---

## INTRODUCTION

Advice .....	3
Note to the Owner WARNINGS FOR AIR CONDITIONING SYSTEM REPAIR OPERATIONS	4
Safety rules SAFETY REGULATIONS .....	5
Personal safety CAB AIR CONDITIONING SYSTEM .....	8
Basic instructions .....	9
Special tools NOTES FOR EQUIPMENT .....	11
Consumables .....	12
Part identification .....	13

## **Advice**

### **IMPORTANT NOTICE**

All maintenance and repair work described in this manual must be performed exclusively by NEW HOLLAND service technicians, in strict accordance with the instructions given and using any specific tools necessary. Anyone performing the operations described herein without strictly following the instructions is personally responsible for any eventual injury or damage to property.

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## **Note to the Owner WARNINGS FOR AIR CONDITIONING SYSTEM REPAIR OPERATIONS**

Starting the system at low temperatures can damage the compressor. Only operate the air conditioner when the engine is hot and the temperature inside the cab is at least **20 °C (68.00 °F)**.

When disconnecting the hoses, close the ends with plastic caps to prevent foreign matter and humidity from getting inside the hoses.

Handle the thermostatic sensor carefully to avoid damage that may prevent efficient system operation.

Always use two spanners to unscrew the hose fittings to avoid twisting the fitting.

Do not use any type of engine oil to lubricate the compressor and the system.

Never leave the compressor oil container open, always make sure that it is tightly closed. If left exposed the oil will absorb humidity from the air and may, subsequently, damage the system.

Do not transfer compressor oil from the original container to another container.

Do not introduce any additives to the compressor oil. Any additional substances could contain elements which are incompatible with the chemical base of the refrigerant and thus alter its characteristics.

Check that the thermostatic sensor is correctly inserted in the fins on the evaporator to ensure efficient system operation.

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## Safety rules SAFETY REGULATIONS

### TO PREVENT ACCIDENTS

Most accidents or injuries that occur in workshops are the result of non-observance of simple and fundamental safety regulations.

For this reason, IN MOST CASES THESE ACCIDENTS CAN BE AVOIDED: by foreseeing possible causes and consequently acting with the necessary caution and care.

Accidents may occur with all types of vehicle, regardless of how well it was designed and built.

A careful and judicious service technician is the best guarantee against accidents.

Precise observance of the most basic safety rule is normally sufficient to avoid many serious accidents.

DANGER: Never carry out any cleaning, lubrication or maintenance operations when the engine is running.

### GENERAL

- Carefully follow specified repair and maintenance procedures.
- Do not wear rings, wristwatches, jewellery, unbuttoned or loose articles of clothing such as: ties, torn clothing, scarves, open jackets or shirts with open zips that may remain entangled in moving parts.  
It is advised to wear approved safety clothing, e.g: non-slip footwear, gloves, safety goggles, helmets, etc.
- Do not carry out repair operations with someone sitting in the driver's seat, unless the person is a trained technician who is assisting with the operation in question.
- Operate the vehicle and use the implements exclusively from the driver's seat.
- Do not carry out operations on the vehicle with the engine running, unless specifically indicated.
- Stop the engine and ensure that all pressure is relieved from hydraulic circuits before removing caps, covers, valves, etc.
- All repair and maintenance operations must be carried out using extreme care and attention.
- Service steps and platforms used in a workshop or in the field should be built in compliance with the safety rules in force.
- Disconnect the batteries and label all controls to indicate that the vehicle is being serviced. Block the machine and all equipment which should be raised.
- Do not check or fill fuel tanks, accumulator batteries, nor use starting liquid when smoking or near naked flames, as these fluids are inflammable.
- Brakes are inoperative if manually released for repair or maintenance purposes.  
In such cases, the machine should be kept constantly under control using blocks or similar devices.
- The fuel nozzle should always be in contact with the filling aperture. Maintain this position until filling operations are completed in order to avoid possible sparks caused by the accumulation of static electricity.
- Only use specified towing points for towing the tractor, connect parts carefully. Make sure that all pins and/or locks are secured in position before applying traction.  
Never remain near the towing bars, cables or chains that are operating under load
- Transport vehicles that cannot be driven using a trailer or a low-loading platform trolley, if available.
- When loading or unloading the vehicle from the trailer (or other means of transport), select a flat area capable of sustaining the trailer or truck wheels, firmly secure the tractor to the truck or trailer and lock the wheels in the position.
- Electric heaters, battery-chargers and similar equipment must only be powered by auxiliary power supplies with efficient ground insulation to avoid electrical shock hazards.
- Always use suitable hoisting or lifting devices when raising or moving heavy parts.
- Take extra care if bystanders are present.
- Never pour gasoline or diesel oil into open, wide and low containers.
- Never use gasoline, diesel oil or other inflammable liquids as cleaning agents. Use non-flammable non-toxic proprietary solvents.
- Wear safety goggles with side guards when cleaning parts with compressed air.
- Limit the air pressure to a maximum of **2.1 bar (30.5 psi)**, according to local regulations.

## INTRODUCTION

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- Do not run the engine in confined spaces without suitable ventilation.
- Do not smoke, use naked flames, or cause sparks in the area when fuel filling or handling highly inflammable liquids.
- Never use naked flames for lighting when working on the machine or checking for leaks.
- All movements must be carried out carefully when working under, on or near the vehicle and wear protective equipment: helmets, goggles and special footwear.
- When carrying out checks with the engine running, request the assistance of an operator in the driver's seat. The operator must maintain visual contact with the service technician at all times.
- If operating outside the workshop, position the vehicle on a flat surface and lock in position. If working on a slope, lock the vehicle in position and move to a flat area as soon as is safely possible.
- Damaged or bent chains or cables are unreliable. Do not use them for lifting or towing.  
Always use suitable protective gloves when handling chains or cables.
- Chains should always be safely secured. Ensure that fastening device is strong enough to hold the load foreseen. No persons should stop near the fastening point, trailing chains or cables.
- Maintenance and repair operations must be carried out in a CLEAN and DRY area, eliminate any water or oil spillage immediately.
- Do not create piles of oil or grease--soaked rags as they represent a serious fire hazard; store them in a closed metal container.  
Before starting the vehicle or implements, make sure that the driver's seat is locked in position and always check that the area is free of persons or obstacles.
- Empty pockets of all objects that may fall unobserved into the vehicle parts when disassembled.
- In the presence of protruding metal parts, use protective goggles or goggles with side guards, helmets, special footwear and gloves.
- Handle all parts carefully, do not put your hands or fingers between moving parts, wear suitable safety clothing -- safety goggles, gloves and shoes.

## WELDING OPERATIONS

- When welding, use protective safety devices: tinted safety goggles, helmets, special overalls, gloves and footwear. All persons present in the area where welding is taking place must wear tinted goggles.  
NEVER LOOK AT THE WELDING ARC IF YOUR EYES ARE NOT SUITABLY PROTECTED.
- Where possible, remove the part or tool that requires arc welding from the tractor.
- Disconnect both battery leads. Isolate the cable ends to avoid contact with each other and the tractor.
- Position the welder ground clamp as near as possible to the area where welding is taking place.
- Remove the electronic control units located on the tractor if welding is to be carried out near these control units.
- Never allow welding cables to lay on, near or across any electrical wiring or electronic component while welding is in progress.
- Metal cables tend to fray with repeated use. Always use suitable protective devices (gloves, goggles, etc.) when handling cables.

## START UP

- Never start the engine in confined spaces that are not equipped with adequate ventilation for exhaust gas extraction.
- Never place the head, body, limbs, feet, hands or fingers near fans or rotating belts.

## ENGINE

- Always loosen the radiator cap slowly before removing it to allow any remaining pressure in the system to be discharged. Coolant should be topped up only when the engine is stopped or idle if hot.
- Never fill up with fuel when the engine is running, especially if hot, in order to prevent the outbreak of fire as a result of fuel spillage
- Never check or adjust fan belt tension when the engine is running.  
Never adjust the fuel injection pump when the vehicle is moving.



## **SERVICE MANUAL**

### **Engine**

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# Contents

---

## Engine - 10

[10.001] Engine and crankcase .....	10.1
[10.216] Fuel tanks .....	10.2
[10.501] Exhaust Gas Recirculation (EGR) - Diesel Particulate Filter (DPF) exhaust treatment	10.3
[10.414] Fan and drive .....	10.4



## **Engine - 10**

### **Engine and crankcase - 001**

**T4.55 Powerstar™ without cab, Tier 4B (Final) [ZxAHxxxxx], T4.55 Powerstar™ with cab, Tier 4B (Final) [ZxAHxxxxx], T4.65 Powerstar™ without cab, Tier 4B (Final) [ZxAHxxxxx], T4.65 Powerstar™ with cab, Tier 4B (Final) [ZxAHxxxxx], T4.75 Powerstar™ without cab, Tier 4B (Final) [ZxAHxxxxx], T4.75 Powerstar™ with cab, Tier 4B (Final) [ZxAHxxxxx]**



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# Contents

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## Engine - 10

### Engine and crankcase - 001

#### SERVICE

##### Engine

Remove .....	3
Install .....	11

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