

SERVICE MANUAL

**BI00C / BI00C LR / BI00C TC /
BI10C / BI10C TC / BI15C TC**

Stage IV

Tractor Loader Backhoe

Part number 48126557

English

February 2017





SERVICE MANUAL

B100C LR, B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD), MARBLE CUTTING, B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD), B100C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD), B110C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD), B110C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD), B115C TC STAGE IV, CENTER PIVOT (CP), B115C TC STAGE IV, SIDE SHIFT (SS)

Link Product / Engine

Product	Market Product	Engine
B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD), MARBLE CUTTING	Europe	F5BFL413A*B009
B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	Australia New Zealand	F5BFL413A*B009
B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	Europe	F5BFL413A*B009
B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	Asia Pacific	F5BFL413A*B009
B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	Middle East Africa	F5BFL413A*B009
B100C LR	Europe	F5HFL413C*A001
B100C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Australia New Zealand	F5HFL413C*A001
B100C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Middle East Africa	F5HFL413C*A001
B100C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Europe	F5HFL413C*A001
B100C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Asia Pacific	F5HFL413C*A001
B110C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	Latin America	F5HFL413B*A001
B110C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	North America	F5HFL413B*A001
B110C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	Europe	F5HFL413B*A001
B110C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Middle East Africa	F5HFL413B*A001
B110C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Latin America	F5HFL413B*A001
B110C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Australia New Zealand	F5HFL413B*A001

<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
B110C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Asia Pacific	F5HFL413B*A001
B110C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD)	Europe	F5HFL413B*A001
B115C TC STAGE IV, CENTER PIVOT (CP)	Asia Pacific	F5BFL413A*C004
B115C TC STAGE IV, CENTER PIVOT (CP)	Australia New Zealand	F5BFL413A*C004
B115C TC STAGE IV, CENTER PIVOT (CP)	Europe	F5BFL413A*C004
B115C TC STAGE IV, CENTER PIVOT (CP)	Middle East Africa	F5BFL413A*C004
B115C TC STAGE IV, SIDE SHIFT (SS)	Europe	F5BFL413A*C004
B115C TC STAGE IV, SIDE SHIFT (SS)	Asia Pacific	F5BFL413A*C004
B115C TC STAGE IV, SIDE SHIFT (SS)	Australia New Zealand	F5BFL413A*C004
B115C TC STAGE IV, SIDE SHIFT (SS)	Middle East Africa	F5BFL413A*C004

Contents

INTRODUCTION

Engine.....	10
[10.001] Engine and crankcase	10.1
[10.216] Fuel tanks	10.2
[10.206] Fuel filters	10.3
[10.218] Fuel injection system.....	10.4
[10.500] Selective Catalytic Reduction (SCR) exhaust treatment.....	10.5
[10.400] Engine cooling system	10.6
[10.414] Fan and drive	10.7
Power coupling.....	19
[19.100] Drive shaft.....	19.1
Transmission.....	21
[21.112] Power shuttle transmission.....	21.1
[21.134] Power shuttle transmission external controls	21.2
[21.154] Power shuttle transmission internal components	21.3
[21.113] Powershift transmission	21.4
[21.135] Powershift transmission external controls.....	21.5
[21.105] Powershift transmission hydraulic components.....	21.6
[21.155] Powershift transmission internal components.....	21.7
Front axle system	25
[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
Rear axle system.....	27
[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
[27.450] Rear-powered steerable axle	27.4
Brakes and controls	33
[33.202] Hydraulic service brakes	33.1
[33.110] Parking brake or parking lock	33.2
Hydraulic systems.....	35
[35.000] Hydraulic systems.....	35.1
[35.300] Reservoir, cooler, and filters.....	35.2
[35.104] Fixed displacement pump.....	35.3
[35.106] Variable displacement pump	35.4
[35.102] Pump control valves.....	35.5
[35.350] Safety and main relief valves	35.6
[35.357] Pilot system	35.7
[35.128] Auxiliary hydraulic function control	35.8
[35.355] Hydraulic hand control	35.9
[35.352] Hydraulic swing system	35.10
[35.724] Front loader hydraulic system control.....	35.11
[35.701] Front loader arm hydraulic system	35.12
[35.723] Front loader bucket hydraulic system	35.13
[35.726] Excavator and backhoe hydraulic controls.....	35.14
[35.736] Boom hydraulic system	35.15
[35.737] Dipper hydraulic system.....	35.16
[35.738] Excavator and backhoe bucket hydraulic system.....	35.17
[35.739] Swing arm hydraulic system	35.18
[35.703] Stabilizer hydraulic system.....	35.19
[35.740] Telescopic arm hydraulic system.....	35.20
Frames and ballasting	39
[39.100] Frame	39.1

[39.140] Ballasts and supports	39.2
Steering.....	41
[41.101] Steering control	41.1
[41.106] Tie rods.....	41.2
[41.200] Hydraulic control components.....	41.3
[41.216] Cylinders	41.4
Wheels	44
[44.511] Front wheels.....	44.1
[44.520] Rear wheels.....	44.2
Cab climate control	50
[50.100] Heating	50.1
[50.104] Ventilation	50.2
[50.200] Air conditioning	50.3
Electrical systems	55
[55.100] Harnesses and connectors.....	55.1
[55.301] Alternator	55.2
[55.302] Battery.....	55.3
[55.011] Fuel tank system	55.4
[55.012] Engine cooling system	55.5
[55.640] Electronic modules.....	55.6
[55.512] Cab controls.....	55.7
[55.991] Telematics	55.8
[55.DTC] FAULT CODES.....	55.9
Front loader and bucket.....	82
[82.100] Arm.....	82.1
[82.300] Bucket.....	82.2
Booms, dippers, and buckets	84
[84.114] Boom pivoting support	84.1

[84.910] Boom	84.2
[84.912] Dipper arm	84.3
[84.100] Bucket	84.4
Platform, cab, bodywork, and decals	90
[90.105] Machine shields and guards	90.1



INTRODUCTION

Foreword - Important notice regarding equipment servicing

B100C LR	
B100C TC	
B100C	
B110C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD)	
B110C TC	
B115C TC STAGE IV, CENTER PIVOT (CP)	
B115C TC STAGE IV, SIDE SHIFT (SS)	

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

B100C LR	
B100C TC	
B100C	
B110C TC	
B110C	
B115C TC	


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

General safety rules

Use caution when you operate the machine on slopes. Raised equipment, full tanks and other loads will change the center of gravity of the machine. The machine can tip or roll over when near ditches and embankments or uneven surfaces.

Never permit anyone other than the operator to ride on the machine.

Never operate the machine under the influence of alcohol or drugs, or while you are otherwise impaired.

When digging or using ground-engaging attachments, be aware of buried cables. Contact local utilities to determine the locations of services.

Pay attention to overhead power lines and hanging obstacles. High voltage lines may require significant clearance for safety.

Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin, causing serious injury or infection.

- DO NOT use your hand to check for leaks. Use a piece of cardboard or paper.
- Stop the engine, remove the key, and relieve the pressure before you connect or disconnect fluid lines.
- Make sure that all components are in good condition. Tighten all connections before you start the engine or pressurize the system.
- If hydraulic fluid or diesel fuel penetrates the skin, seek medical attention immediately.
- Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.

Keep clear of moving parts. Loose clothing, jewelry, watches, long hair, and other loose or hanging items can become entangled in moving parts.

Wear protective equipment when appropriate.

DO NOT attempt to remove material from any part of the machine while it is being operated or while components are in motion.

Make sure that all guards and shields are in good condition and properly installed before you operate the machine. Never operate the machine with shields removed. Always close access doors or panels before you operate the machine.

Dirty or slippery steps, ladders, walkways, and platforms can cause falls. Make sure these surfaces remain clean and clear of debris.

A person or pet within the operating area of a machine can be struck or crushed by the machine or its equipment. DO NOT allow anyone to enter the work area.

Raised equipment and/or loads can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.

Never operate the engine in enclosed spaces as harmful exhaust gases may build up.

Before you start the machine, be sure that all controls are in neutral or park lock position with the backhoe swing lock pin in the lock position. The backhoe swing lock pin must be in the lock position when you are not using the backhoe.

Start the engine only from the operator's seat. If you bypass the safety start switch, the engine can start with the transmission in gear. Do not connect or short across terminals on the starter solenoid. Attach jumper cables as described in the manual. Starting in gear may cause death or serious injury.

Always keep windows, mirrors, all lighting, and Slow-Moving Vehicle (SMV) emblem clean to provide the best possible visibility while you operate the machine.

INTRODUCTION

Operate controls only when seated in the operator's seat, except for those controls expressly intended for use from other locations.

From the operator's platform, install the backhoe swing lock pin when the backhoe is not in use and before all other operation.

Before you leave the machine:

1. Park the machine on a firm, level surface.
2. Put all controls in neutral or park lock position.
3. Engage the parking brake. Use wheel chocks if required.
4. Lower the loader bucket or other front attachment to the ground.
5. Move the operator's seat to the backhoe operating position and choose one of the following backhoe positions:
 - Move the backhoe into the stowed position and from the operator's seat install the backhoe swing lock pin. See **Swing tower - Basic instructions ()** .
 - Lower the backhoe bucket or other attachment to the ground.
6. Turn off the engine and remove the key.
7. Move the operator's seat into the driving position.

When, due to exceptional circumstances, you decide to keep the engine running after you leave the operator's station, then you must follow these precautions:

1. Bring the engine to low idle speed.
2. Disengage all drive systems.

WARNING

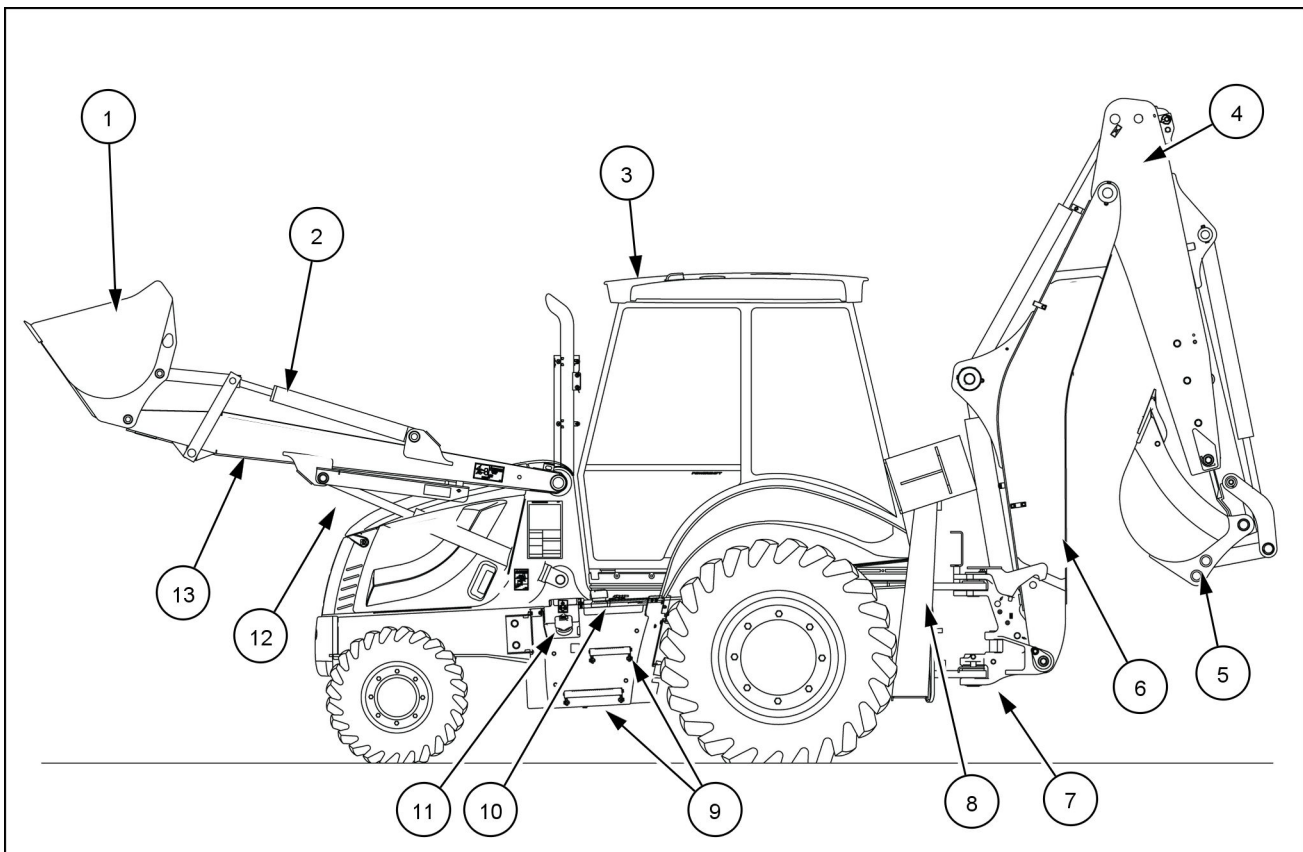
**Some components may continue to run down after you disengage drive systems.
Make sure all drive systems are fully disengaged.
Failure to comply could result in death or serious injury.**

W0113A

INTRODUCTION

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Loader arm 2. Loader Bucket 3. Loader arm bucket cylinder 4. Engine hood 5. Front driving light 6. Front axle 7. Front work lights 8. Operator compartment 9. Fuel tank and DIESEL EXHAUST FLUID (DEF)/AdBLUE® tank 10. Rear Axle 11. Rearview side mirror 12. Rear work lights | <ol style="list-style-type: none"> 13. Exhaust stack 14. Hydraulic oil tank, battery box, and optional tool box 15. Boom cylinder 16. Side shift carriage 17. Side shift stabilizer with pad 18. Backhoe swing tower 19. Backhoe boom 20. Backhoe bucket 21. Backhoe bucket links with lift hook 22. Backhoe Bucket cylinder 23. Backhoe dipper arm cylinder 24. Backhoe dipper arm (extendable) |
|--|--|

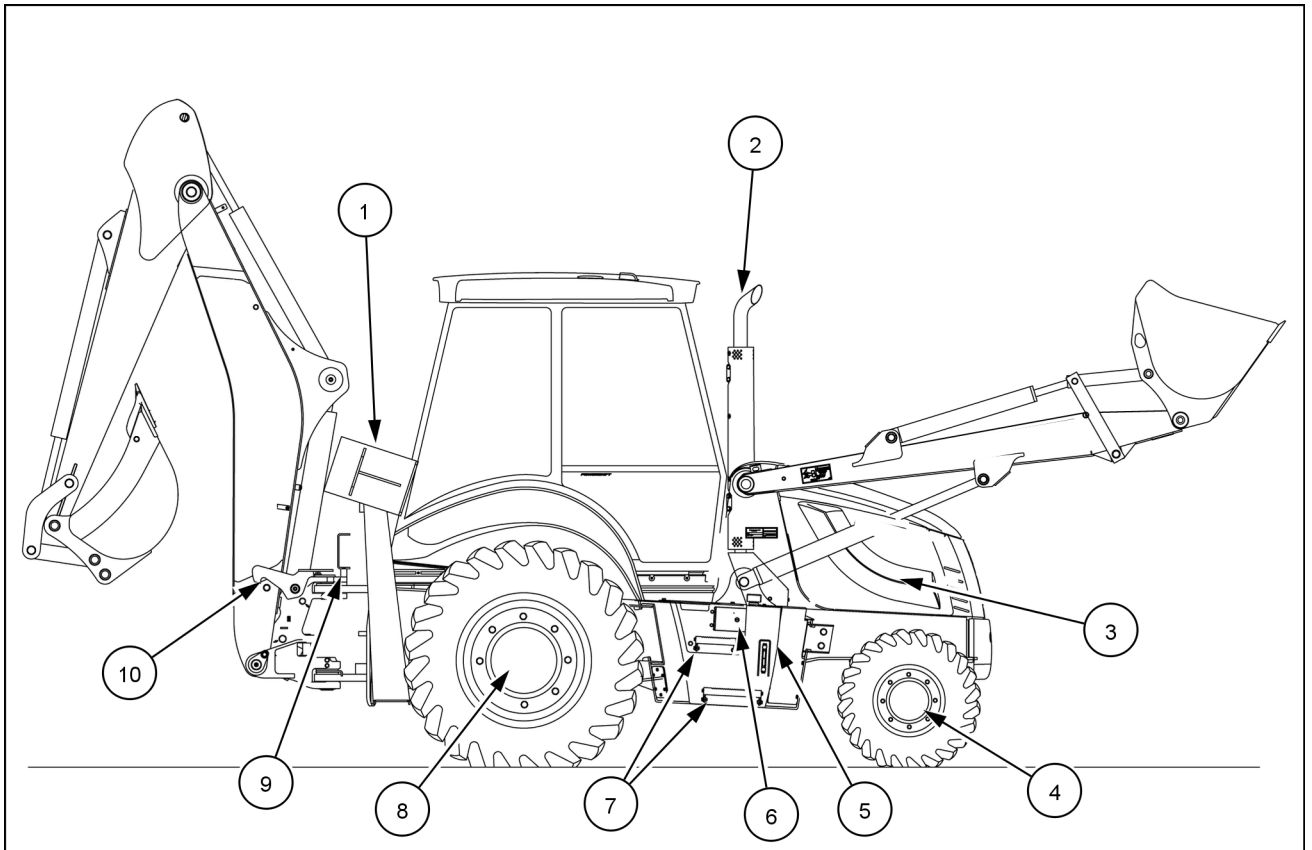
Center pivot version



RAIL15TLB0249FA 2

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Loader bucket 2. Loader bucket cylinder and linkage 3. Cab with Roll Over Protective Structure (ROPS) 4. Backhoe dipper or telescopic dipper 5. Backhoe bucket 6. Backhoe boom 7. Backhoe swing tower | <ol style="list-style-type: none"> 8. Left-hand side stabilizer 9. Entry or exit steps 10. Fuel tank 11. DIESEL EXHAUST FLUID (DEF)/AdBLUE® tank 12. Loader arm lift cylinder with safety support strut 13. Loader lift arm |
|--|--|

INTRODUCTION



RAIL15TLB0250FA 3

- | | | | |
|----|----------------------------|-----|---|
| 1. | Right-hand side stabilizer | 6. | Battery compartment |
| 2. | Exhaust stack | 7. | Entry or exit steps |
| 3. | Engine hood | 8. | Rear axle |
| 4. | Front axle | 9. | Swing lock pin (lock position) |
| 5. | Hydraulic tank | 10. | Backhoe boom lock (hydraulic or mechanical) |



SERVICE MANUAL

Engine

B100C LR, B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD), MARBLE CUTTING, B100C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD), B100C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD), B110C STAGE IV, STRAIGHT LOADER ARM (SLA), FOUR-WHEEL DRIVE (4WD), B110C TC STAGE IV, TOOL CARRIER (TC), FOUR-WHEEL DRIVE (4WD), B115C TC STAGE IV, CENTER PIVOT (CP), B115C TC STAGE IV, SIDE SHIFT (SS)



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 - Speeds Stall test check sheet

NOTE: The following specifications are for engines with more than 50 hours of operation.

NOTE: Engine RPM speed is based on the ISO 14396 Cetane number of at least 51 and density between 820 – 845 kg/m³ (1382 – 1424 lb/yd³). Fuel inlet 36.0 – 40.0 °C (96.8 – 104.0 °F).

Results from stall test procedure (fill in values accordingly)

ID	RPM test valve	Stall test component (specified value)
1		Loader hydraulic stall speed (2220 – 2330 RPM)
2		Backhoe hydraulic stall speed (2220 – 2330 RPM)
3		Torque converter stall speed (2150 – 2310 RPM)
4		Combined - loader hydraulic and torque converter - stall speed (1810 – 2090 RPM)

Stall test reference chart

ID	RPM	Results
1	2220 – 2330 RPM	All systems operating within normal specified RPM values.
2	2220 – 2330 RPM	
3	2150 – 2310 RPM	
4	1810 – 2090 RPM	
1	Above 2330 RPM	Engine problem. Check engine speeds. Refer to the engine service manual.
2	2220 – 2330 RPM	
3	Above 2310 RPM	
4	Above 2090 RPM	
1	Below 2220 RPM	Engine problem. Check engine speeds. Replace the fuel and air filters Refer to the engine service manual.
2	2220 – 2330 RPM	
3	Below 2150 RPM	
4	Below 1810 RPM	
1	Below 2220 RPM	Hydraulic system problem(s). Check the setting of the main relief valve. Check the output of the hydraulic pump.
2	2220 – 2330 RPM	
3	2150 – 2310 RPM	
4	Below 1810 RPM	
1	Above 2330 RPM	Hydraulic system problem(s). Check the setting of the main relief valve. Check the output of the hydraulic pump. Check for leakage in the loader control valve.
2	2220 – 2330 RPM	
3	2150 – 2310 RPM	
4	Above 2090 RPM	
1	2220 – 2330 RPM	Hydraulic system problem(s). Check the setting of the main relief valve. Check the output of the hydraulic pump.
2	Below 2200 RPM	
3	2150 – 2310 RPM	
4	1810 – 2090 RPM	
1	2220 – 2330 RPM	Hydraulic system problem(s). Check the setting of the main relief valve. Check the output of the hydraulic pump.
2	Below 2220 RPM	
3	2150 – 2310 RPM	
4	1810 – 2090 RPM	
1	2220 – 2330 RPM	Torque converter or transmission problems.
2	2220 – 2330 RPM	
3	Above 2310 RPM	
4	Above 2090 RPM	
1	2220 – 2330 RPM	Torque converter or transmission problems.
2	2220 – 2330 RPM	
3	Below 2150 RPM	
4	Below 1810 RPM	

<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>