

Farmlift 632
Farmlift 635
Farmlift 735
Farmlift 742
Farmlift 935
Stage IIIB
Telescopic Handler

SERVICE MANUAL

Part number 48192604

English

August 2017

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Link Product / Engine

Product	Market Product	Engine
Farmlift 632 telehandler 6m 120 HP	Europe	F4HFE413C*A
Farmlift 635 Telehandler 6m 140 hp	Europe	F4HFE413J*A
Farmlift 735 Telehandler 7m 120 HP - Dump Angle Increased [FNHZF735NGKC35101 -]	Europe	F4HFE413C*A
Farmlift 742 Telehandler 7m 140 HP	Europe	F4HFE413J*A
Farmlift 935 Telehandler 10m 120 HP	Europe	F4HFE413C*A

Contents

INTRODUCTION

Engine.....	10
[10.001] Engine and crankcase	10.1
[10.218] Fuel injection system.....	10.2
[10.202] Air cleaners and lines	10.3
[10.254] Intake and exhaust manifolds and muffler	10.4
[10.400] Engine cooling system	10.5
[10.304] Engine lubrication system.....	10.6
Transmission.....	21
[21.113] Powershift transmission	21.1
[21.135] Powershift transmission external controls.....	21.2
[21.155] Powershift transmission internal components.....	21.3
[21.120] Gearbox	21.4
[21.700] Torque converter	21.5
Four-Wheel Drive (4WD) system	23
[23.314] Drive shaft.....	23.1
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
Brakes and controls	33
[33.202] Hydraulic service brakes	33.1
[33.110] Parking brake or parking lock	33.2

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[33.220] Trailer brake hydraulic control.....	33.3
[33.204] Front axle brake	33.4
Hydraulic systems.....	35
[35.000] Hydraulic systems.....	35.1
[35.104] Fixed displacement pump	35.2
[35.106] Variable displacement pump	35.3
[35.359] Main control valve	35.4
[35.357] Pilot system	35.5
[35.128] Auxiliary hydraulic function control	35.6
[35.752] Hydraulic fan drive cooling system.....	35.7
[35.100] Main lift system.....	35.8
[35.701] Front loader arm hydraulic system	35.9
[35.736] Boom hydraulic system	35.10
[35.734] Tool quick coupler hydraulic system	35.11
[35.740] Telescopic arm hydraulic system.....	35.12
Steering.....	41
[41.101] Steering control	41.1
[41.200] Hydraulic control components.....	41.2
[41.216] Cylinders	41.3
Cab climate control	50
[50.104] Ventilation	50.1
[50.200] Air conditioning	50.2
Electrical systems.....	55
[55.100] Harnesses and connectors.....	55.1
[55.201] Engine starting system	55.2
[55.301] Alternator	55.3
[55.011] Fuel tank system	55.4
[55.512] Cab controls.....	55.5

[55.404] External lighting	55.6
[55.514] Cab lighting	55.7
[55.408] Warning indicators, alarms, and instruments	55.8
[55.DTC] FAULT CODES.....	55.9
Telescopic single arm	83
[83.122] Telescopic arm	83.1
Platform, cab, bodywork, and decals	90
[90.150] Cab.....	90.1



INTRODUCTION

Safety rules

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 which, if not avoided, will result in death or serious injury.

 **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, 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 which, 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 which 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.

Personal safety

Carefully read this Manual before proceeding with maintenance, repairs, refuelling or other machine operations.

Repairs have to be carried out only by authorized and instructed staff; specific precautions have to be taken when grinding, welding or when using mallets or heavy hammers.

Not authorized persons are not allowed to repair or carry out maintenance on this machine. Do not carry out any work on the equipment without prior authorization.

Ask your employer about the safety instructions in force and safety equipment.

Nobody is allowed to seat on the operator's place during machine maintenance unless he is a qualified operator helping with the maintenance work.

If it is necessary to move the equipment to carry out repairs or maintenance, do not lift or lower the equipment from any other position than the operator's seat.

Never carry out any operation on the machine when the engine is running, except when 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 should be carried out with the greatest care and attention.

Service stairs and platforms used in a workshop or in the field should be built in compliance with the safety rules in force.

Any functional disorders, especially those affecting the safety of the machine, should therefore be rectified immediately.

⚠ DANGER

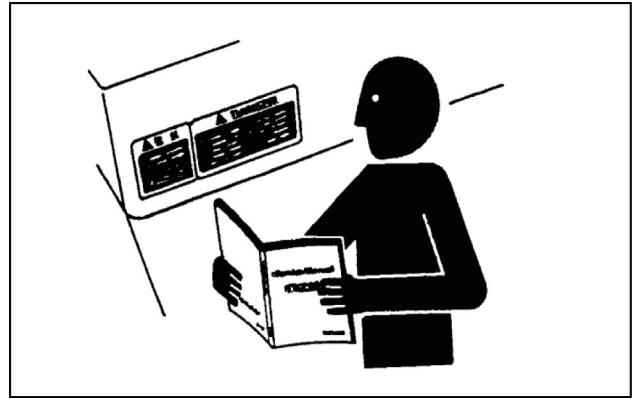
Unexpected movement!

Make sure parking brake is applied. Secure machine with wheel chocks.

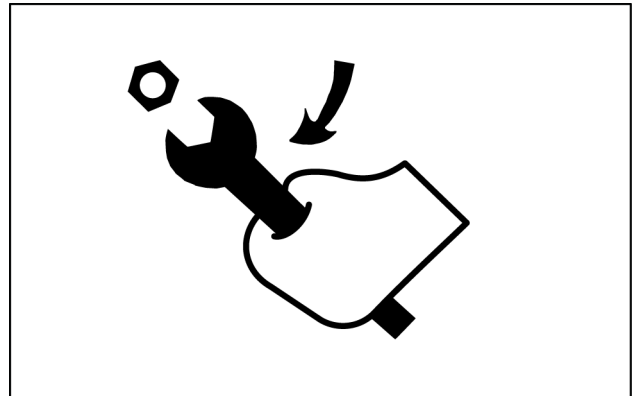
Failure to comply will result in death or serious injury.

D0013A

Before performing any work on the machine, attach a maintenance in progress tag. This tag can be applied on the left-hand control lever, safety lever or cab door.

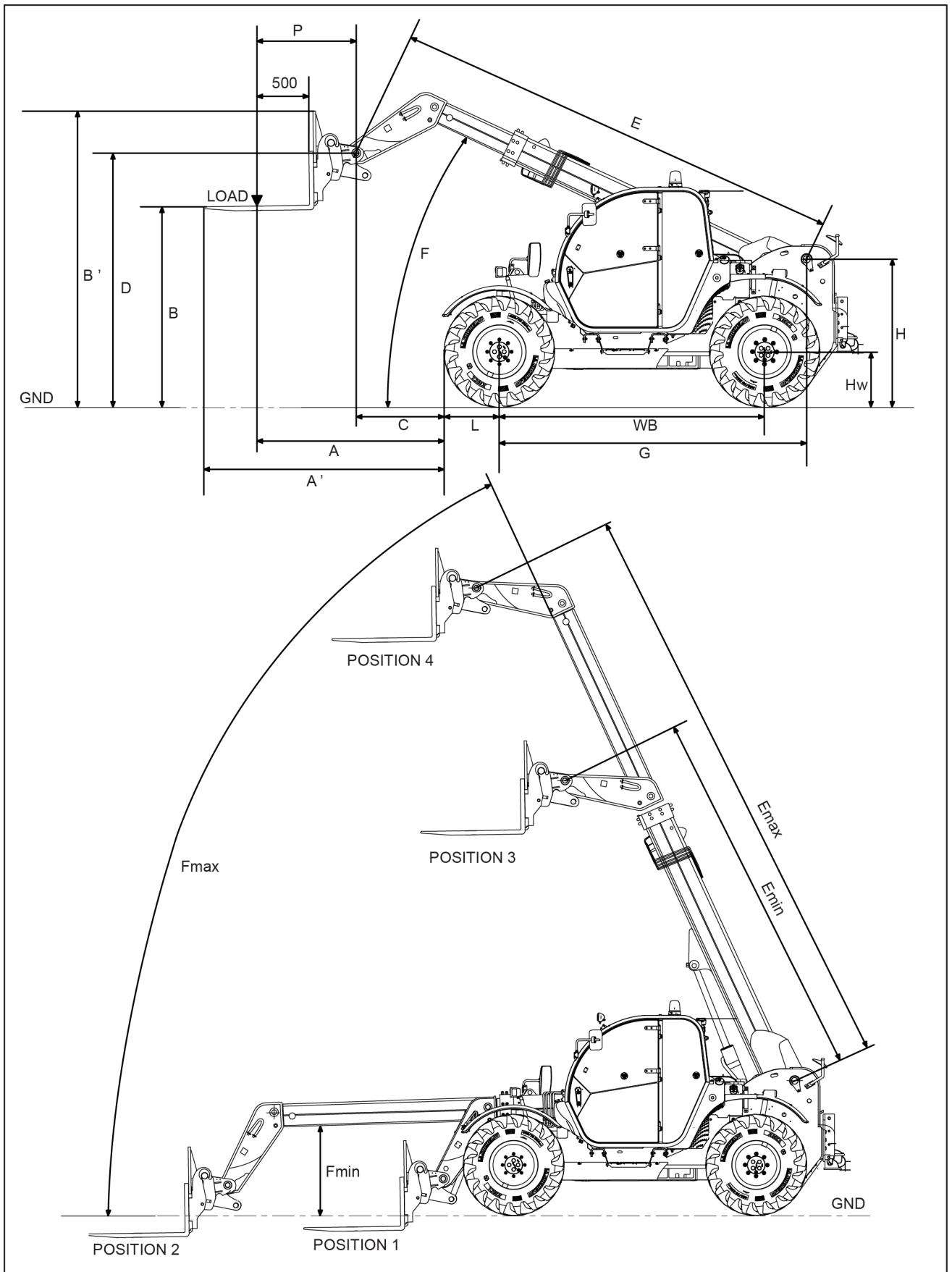


TULI12WEX2004AA 1



TULI12WEX2005AA 2

Lifting Dimensions



LEIL13TLH1387HA 4



SERVICE MANUAL

Engine

**Farmlift 632
Farmlift 635
Farmlift 735
Farmlift 742
Farmlift 935**

Engine - General specification

Characteristics	NEF (New Engine Family), 4 cylinder, emission compliant to Tier4 specification
	Direct Injection – High Pressure
	Common Rail System
	Turbocharged
	Full flow engine oil filter
	Pre-fuel filter with water separator
	Aspirated air cleaner – Replaceable dry type with radial seal
	Muffler – Selective Catalyst Reducer (SCR)
	Fuel Tank – capacity 140 L
	DEF/AdBLUE® Tank- capacity 32 L
	Radiator with expansion bottle
	Antifreeze: - 37 °C
	Throttle, foot: - Self-adjusting belt tensioner - Balanced Engine
Bore and stroke	104 mm (4.09 in) x 132 mm (5.20 in)
Displacement	4.5 L (274 in³)
Compression Ratio	17:1
Number of cylinders (firing order)	4 (1-3-4-2)
Injection pressure pump type	Bosch Cp 3.3
Revolution (from Flywheel side)	Counterclockwise

Power

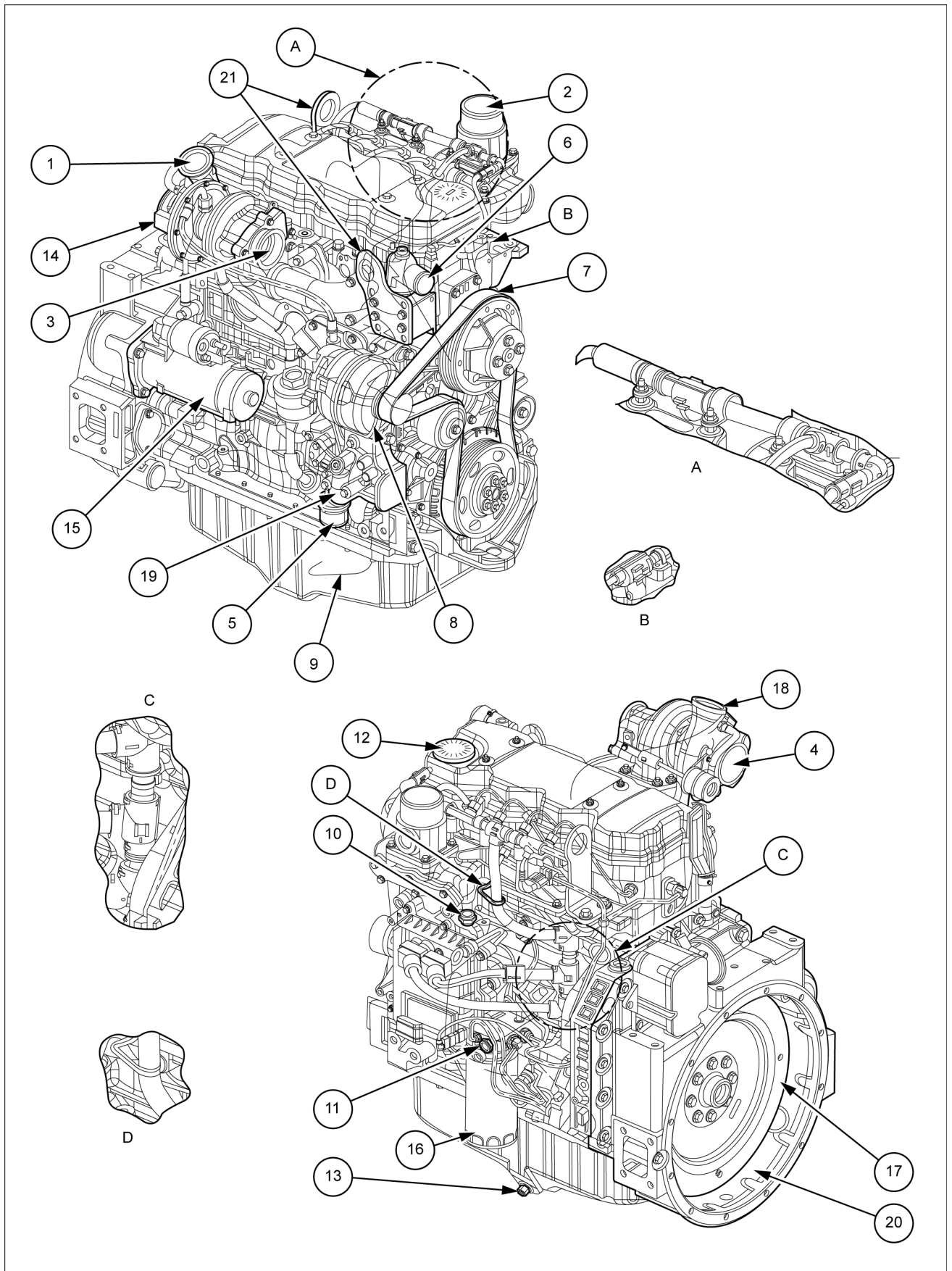
	FARMLIFT 632 – FARMLIFT 735– FARMLIFT 935	FARMLIFT 635 – FARMLIFT 742
Rated Power	81 kW at 2200 RPM	96 kW at 2200 RPM
Peak Power	89 kW at 1800 RPM	105 kW at 1900 RPM
Peak Torque	498 N·m at 1500 RPM	590 N·m at 1500 RPM

Engine speeds

Rated speed – full load	2200 RPM
Low Idle speed at no load	1025 – 1075 RPM
High Idle speed at no load (Engine not installed)	2280 – 2380 RPM

Stall

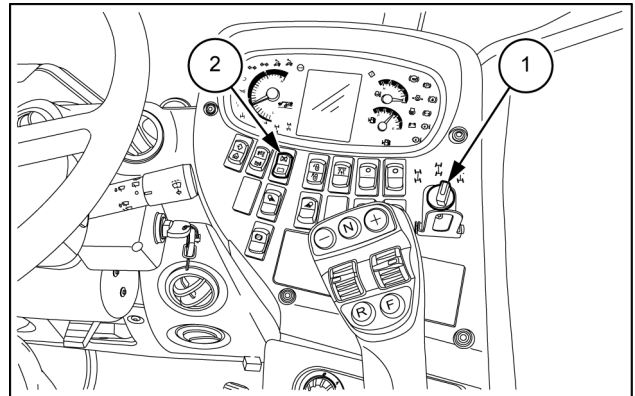
	FARMLIFT 632 – FARMLIFT 735– FARMLIFT 935	FARMLIFT 635 – FARMLIFT 742
Torque Converter Stall	1960 – 2020 RPM	2110 – 2170 RPM
Hydraulic Stall	2200 – 2300 RPM	2250 – 2350 RPM
Combined Stall	1570 – 1630 RPM	1820 – 1880 RPM



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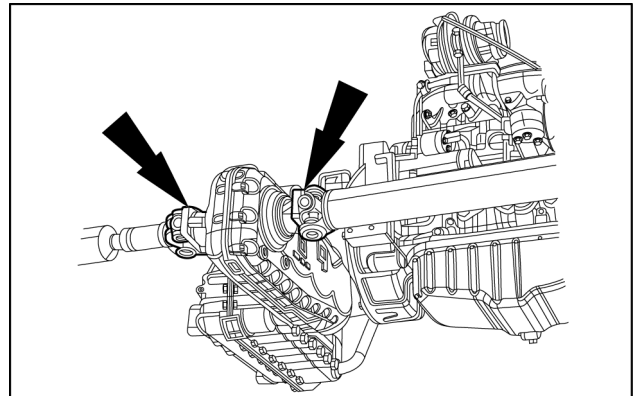
Engine - Remove

Place the machine on a flat surface.
 Turn the Steering Mode selector **(1)** to 4WS (Four Wheel Steering) mode (left side positions).
 Steer the wheels fully to the left side.
 Turn off the engine, and disconnect the batteries from the button **(2)**.
 Apply the label "DO NOT START" to the starting key.



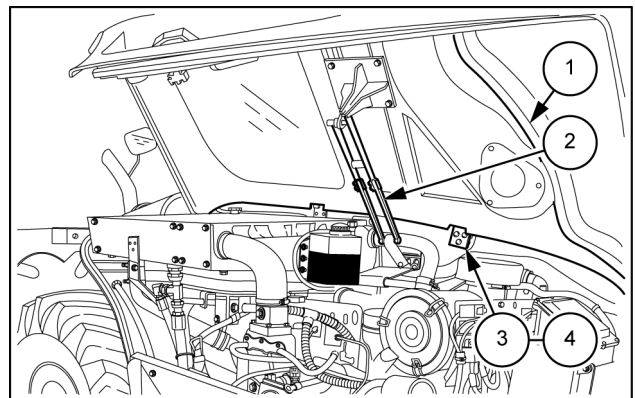
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Loosen and remove the bolts and straps that fasten the rear and front drive shaft transmission.
 Disconnect the drive shaft from transmission.



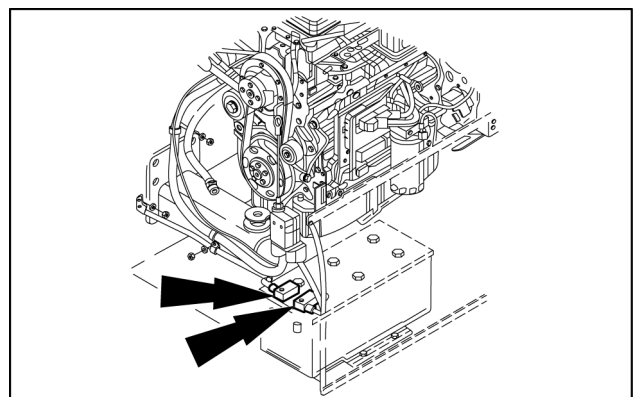
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Drain the hydraulic oil (see Operator's manual).
 Drain the oil transmission (see Operator's manual).
 Raise the engine hood **(1)**. Attach a suitable lifting device and support the engine hood.
 Release the top of the engine hood **(1)** by the lift cylinders **(2)**.
 Loosen and remove the hinges hood mounting bolts **(3)** and **(4)**. Remove the engine hood **(1)** from the machine.
 Open the battery compartment and disconnect the battery from the machine.



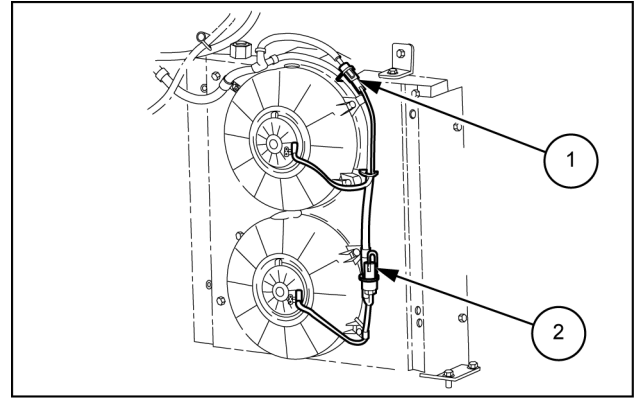
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Disconnect the ground cable from the frame.



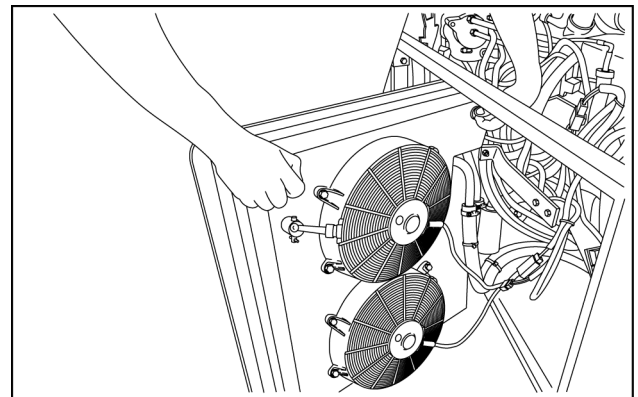
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Open the secondary cooling package cover (side transmission) and remove the two wiring harness **(1)** and **(2)** from the fan cooling.



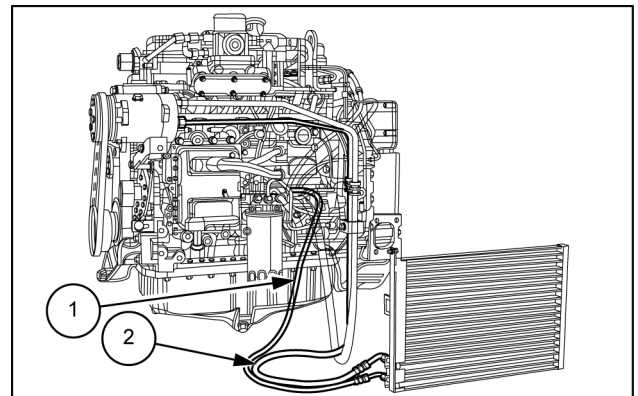
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Loosen the knobs and access to the radiators.



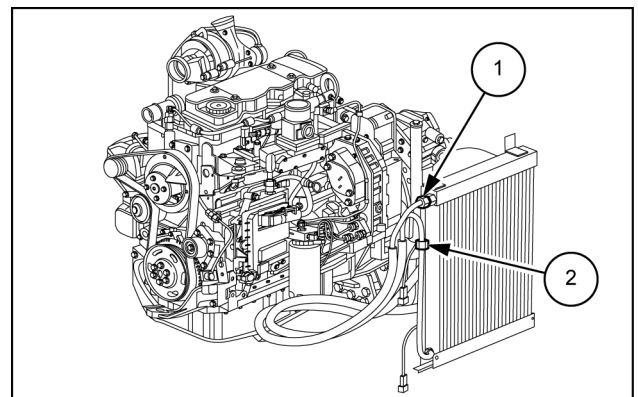
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Drain the air conditioning system (optional) and disconnect the condenser hoses **(1)** and **(2)** from the condenser then remove them.



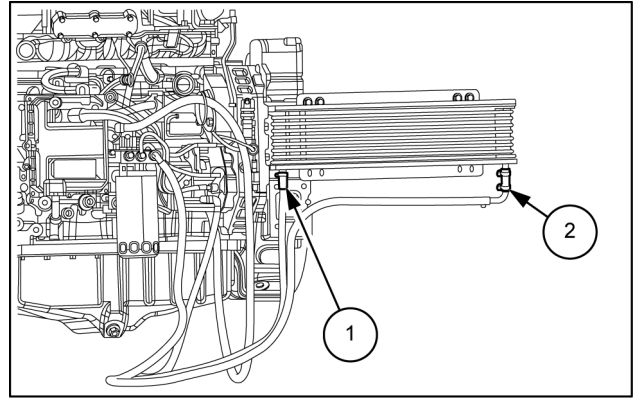
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Disconnect the hoses **(1)** and **(2)** from the transmission oil cooler (radiator side).



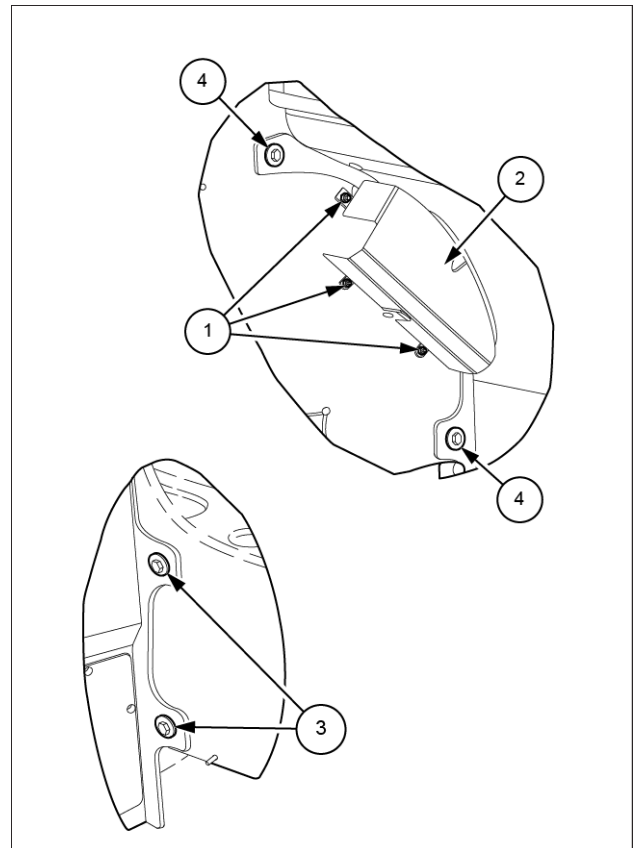
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Disconnect two hoses **(1)** and **(2)** from the fuel cooling radiator.



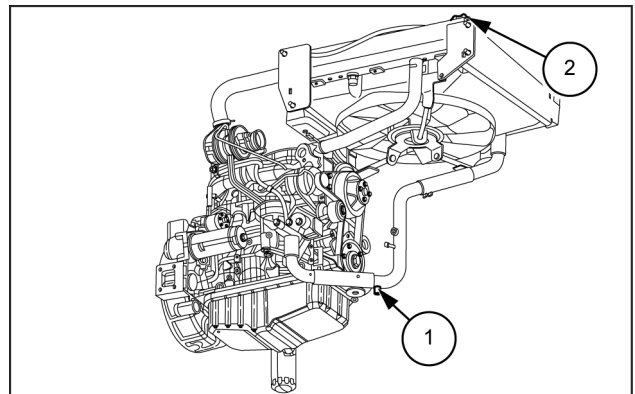
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Loosen the screws **(1)** and remove the **DEF/AdBLUE®** injectors cover **(2)** located behind the rear fender. Loosen the securing bolts **(3)** and **(4)** and washers from machine. Remove the engine cover and pulling to the side. Place a suitable container below radiator drain.



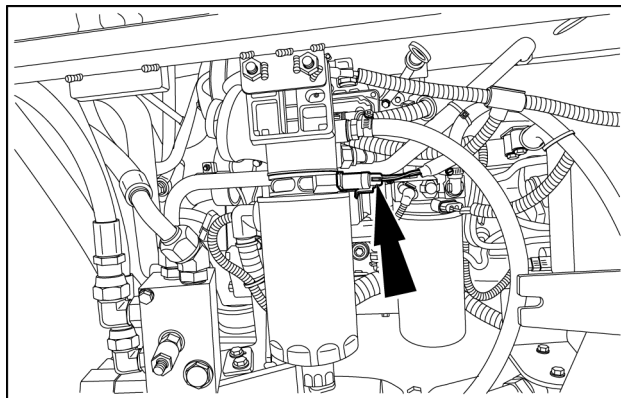
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Remove drain cap **(1)** and drain the engine coolant. To facilitate the discharge remove the introduction radiator cap **(2)** of the liquid radiator. Install the drain plug and radiator cap after coolant has drained.



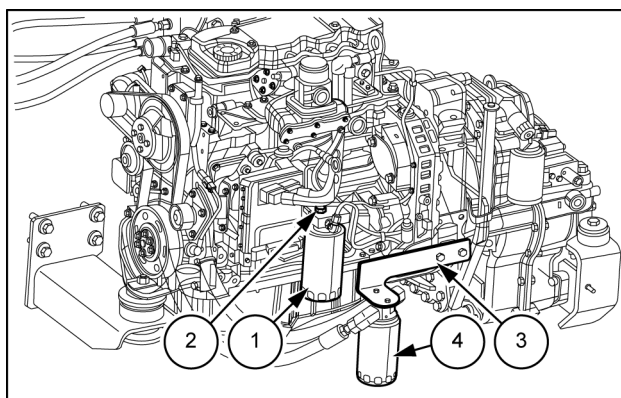
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Disconnect the wiring harness from fuel filter sensor.



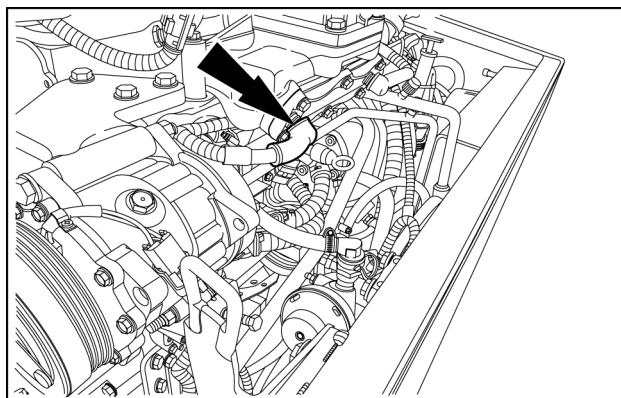
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Disconnect the fuel line hose from fuel filter.
Loosen the screw (2) and remove the fuel filter (1) with support bracket from the frame.
Loosen the screw (3) and remove the hydraulic oil filter (4) from the engine.



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Tag and remove the grid heater cable.



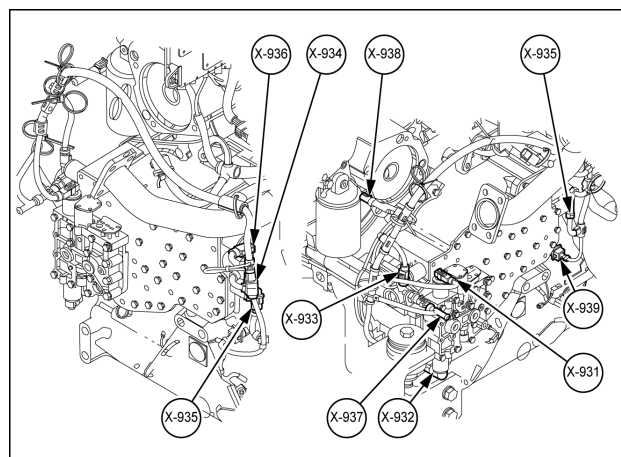
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Tag and disconnect the connectors of the engine wiring harness as listed below:

- (X-936)
- (X-934)
- (X-935)

Tag and disconnect the connectors of the transmission wiring harness listed below:

- (X-939)
- (X-931)
- (X-938)
- (X-933)
- (X-937)
- (X-932)



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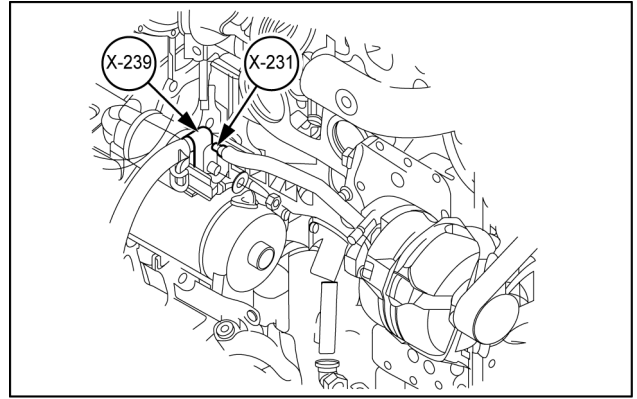
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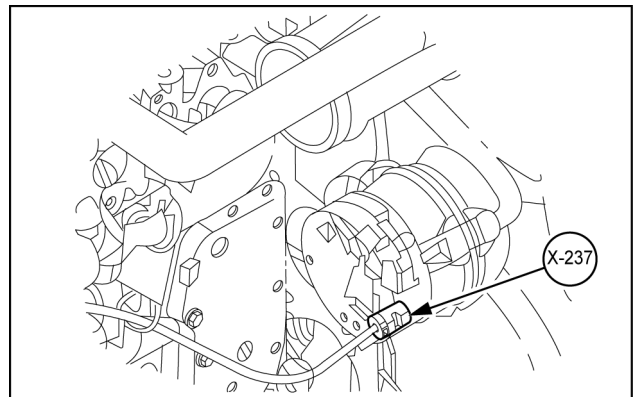
Thank you so much for reading

Tag and disconnect the wiring harness connectors (X-239) and (X-231) from the starter.



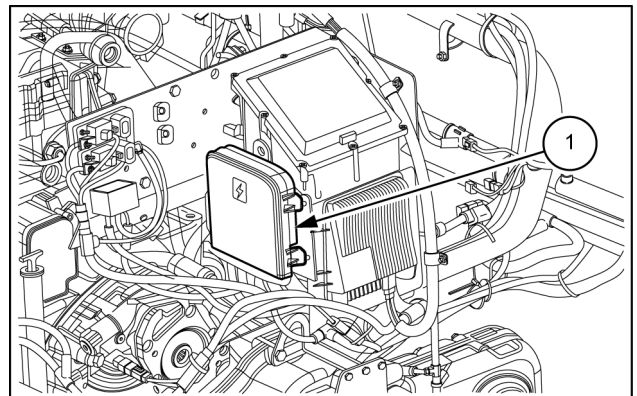
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Tag and disconnect the wiring harness connector (X-237) from the alternator.



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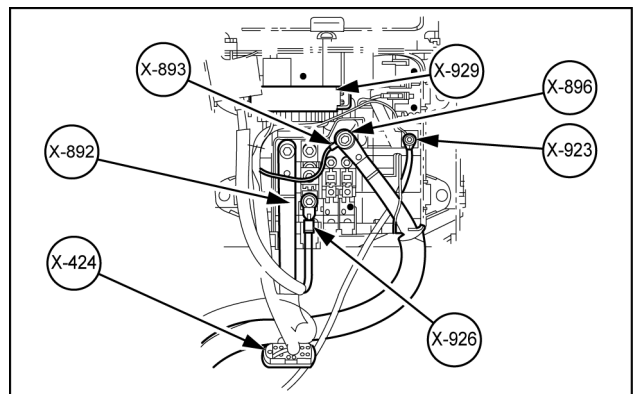
Open the fuse cover (1).



LEIL13TLH0963AB 18

Tag and disconnect the connector of the electrical wiring harness as listed below:

- (X-986)
- (X-923)
- (X-926)
- (X-892)
- (X-893)
- (X-929)



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