

CLEANFIX KIT FOR DOOSAN

DX225/235/255LC

Operating instructions



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1 General information

1.1 Legal notice

1.1.1 Copyright

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1.1.2 Manufacturer and service address



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1.2 Introduction

Before installing or starting up the Cleanfix® reversible fan, familiarize yourself with the contents of these operating instructions. This facilitates safe and efficient handling of the product.

The operating instructions are a component of the product and must always be close at hand. This ensures the following:

- accidents are prevented.
- warranty terms are complied with.

1.2.1 Target group of these operating instructions

These operating instructions are intended exclusively for mechanics trained on agricultural machinery.

The product may be installed and started up only by persons who are familiar with the operating instructions, the product, as well as the national laws and regulations concerning work, safety, and accident prevention.

1.2.2 Liability and damages

Since we are not included in technical service updates from the manufacturer, you may be required to make adjustments when installing this product. Hägele GmbH does not assume responsibility for installation and modification costs.

On account of the information provided in these operating instructions, the manufacturer accepts no liability for direct damages or indirect losses arising from improper operation or maintenance. In the same way, we assume no liability for personal injury or property damage caused by untrained personnel or through failure to comply with regulations concerning work, safety, and accident prevention.

No claims for modification of products that have already been delivered may be made on the basis of the data, illustrations, and descriptions in these operating instructions.

For your safety, use only original spare parts and original accessories.

We assume no liability for the use of other products and any resulting damages.

Observe the following before installation or start-up:

- Inspect delivery for damage in transit and for completeness.
- Immediately document in writing any defects and damages.
- Photograph damaged components.
- Send in a written damage report.

1.2.3 Validity

These operating instructions contain information required to install and start up the product.

In addition to the description of the standard features, the operating instructions contain a number of abstractions and exemplary illustrations of optional features. The product features may therefore partially deviate from the descriptions and depictions.

1.2.4 Product identification

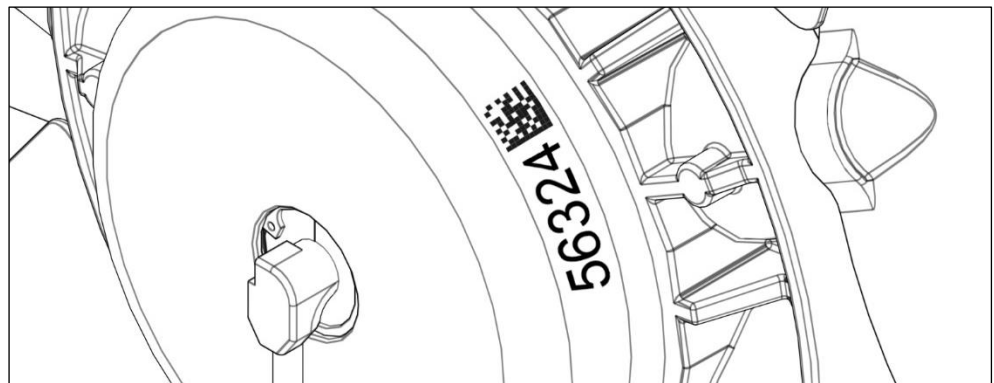
The following information is necessary for inquiries to the manufacturer:

(1) Fan serial number:

- On the side edge of the front housing

Serial number:

#						
---	--	--	--	--	--	--



(2) Vehicle:

Manufacturer: _____

Model: _____

Operating hours: _____

(3) Photo of the fan:

2 Removing the manufacturer's components



CAUTION!

Risk of injury due to the hot engine!

A hot engine can burn hands or other body parts

- Turn off the engine.
- Allow the engine to cool down.
- Remove the ignition key.
- Disconnect the battery.

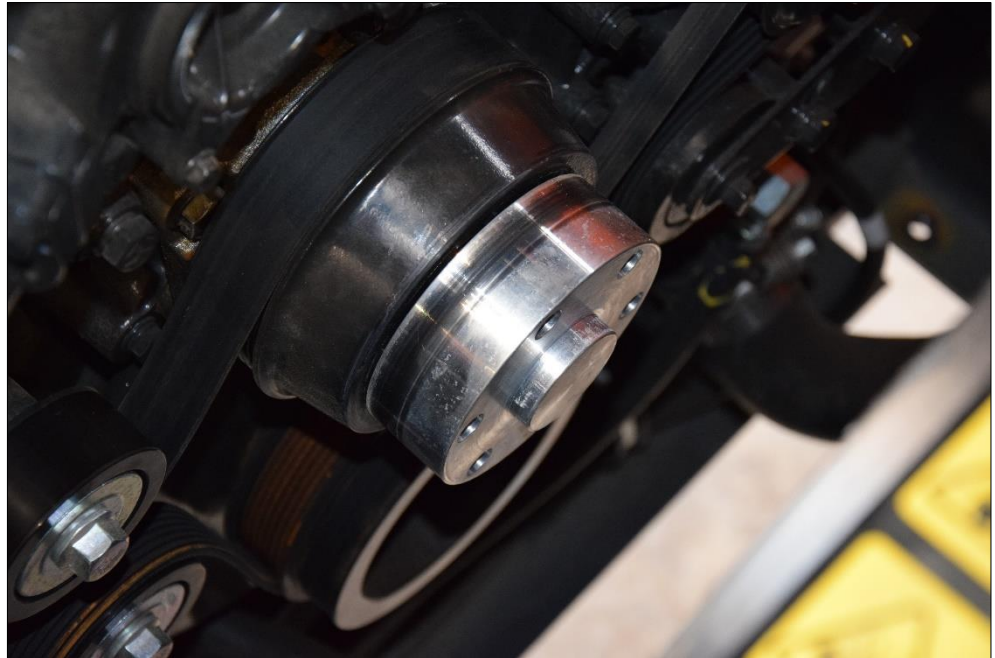
-
- ▶ Make sure that the engine is turned off.
 - ▶ Remove the fan guard to gain access to the manufacturer's installed fan.



- ▶ Remove the base plate below the fan to gain access to the manufacturer's installed fan.



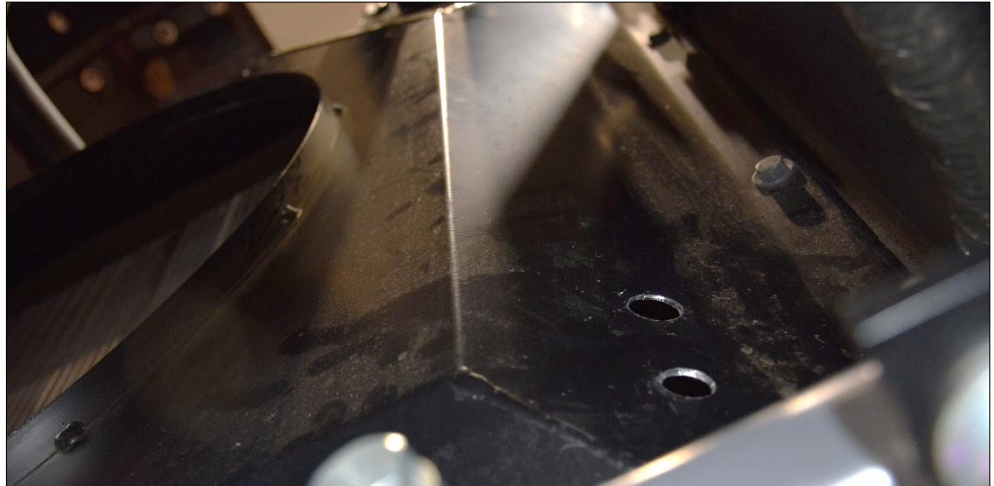
- ▶ Remove the original fan.
- ▶ Remove other fan accessories as required.



3 Installing the Cleanfix® fan components

3.1 Inserting the Cleanfix® reversible fan

- ▶ Drill a 20 mm hole for the hydraulic hose and a 12 mm hole for the Hall sensor cable in the lower right side of the shroud.
- ▶ Install the strain relief fitting included in the installation kit.



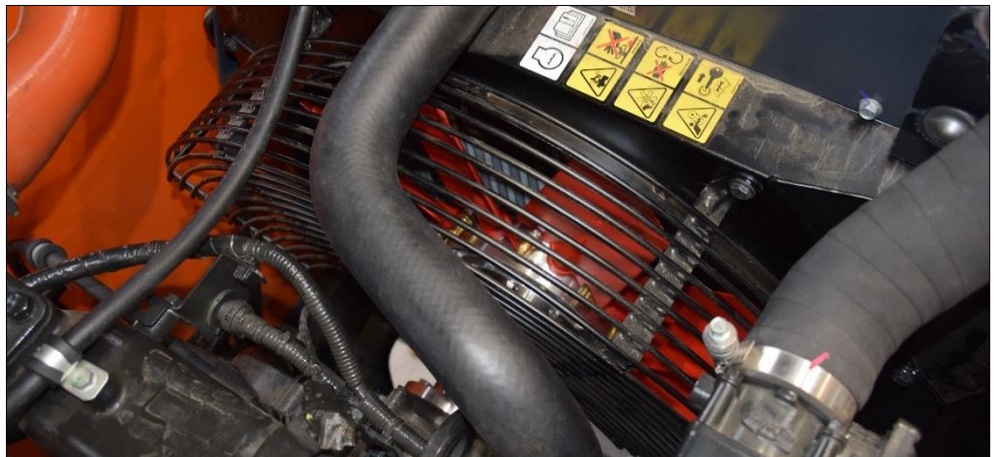
- ▶ Clean the fan drive mounting surface so that excessive axial and radial runout is minimized.
- ▶ Insert first the Cleanfix® fan in the shroud.
- ▶ Secure the Cleanfix® flange with the supplied screws to the fan drive
- ▶ Loosen any belts that drive the fan pulley. This will allow for a more accurate runout measurement.
- ▶ Check the axial and radial runout with a dial gauge. The radial and axial run must not exceed 0,1 mm (0.004 inches).
- ▶ Guide the hydraulic hose and the Hall sensor cable from the inside of the shroud through the strain relief fittings.



- ▶ Install the Cleanfix® fan with the supplied screws to the flange.
- ▶ Secure the hydraulic hose and the Hall sensor cable with the compression nut of the strain relief fittings.



- ▶ Reinstall the fan guard.



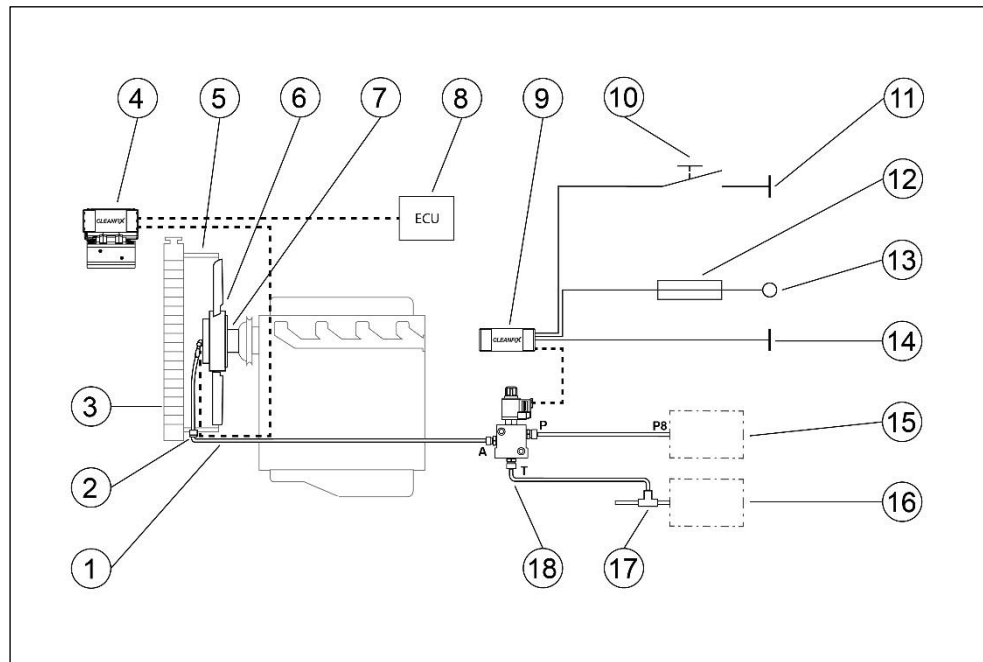
4 Installing the Cleanfix® electrical components

⚠ CAUTION!

Damage caused by lines or tubes that are too loose or are attached to moving parts!

- All lines and tubes must be securely fastened and must not make contact with moving parts.

4.1 Cleanfix® valve unit / Cleanfix® fan speed sensor



- (1) Hydraulic hose (fan to valve unit)
- (2) Strain relief fitting
- (3) Radiator
- (4) Cleanfix® fan speed sensor
- (5) Fan shroud
- (6) Cleanfix® reversible fan (hydraulic)
- (7) Adapter flange
- (8) ECU (engine control unit)
- (9) Cleanfix® timer
- (10) Switch (push button)
- (11) Ground (terminal 31) [grey cable]
- (12) Fuse (12 V / 24 V : 3 A)
- (13) Keyed power (terminal 15) [red cable]
- (14) Ground (terminal 31) [black cable]
- (15) Hydraulic solenoid valve package (connection P8)
- (16) Hydraulic oil tank
- (17) Tee adapter
- (18) Cleanfix® valve unit

4.1.1 Installing the Cleanfix® valve with timer

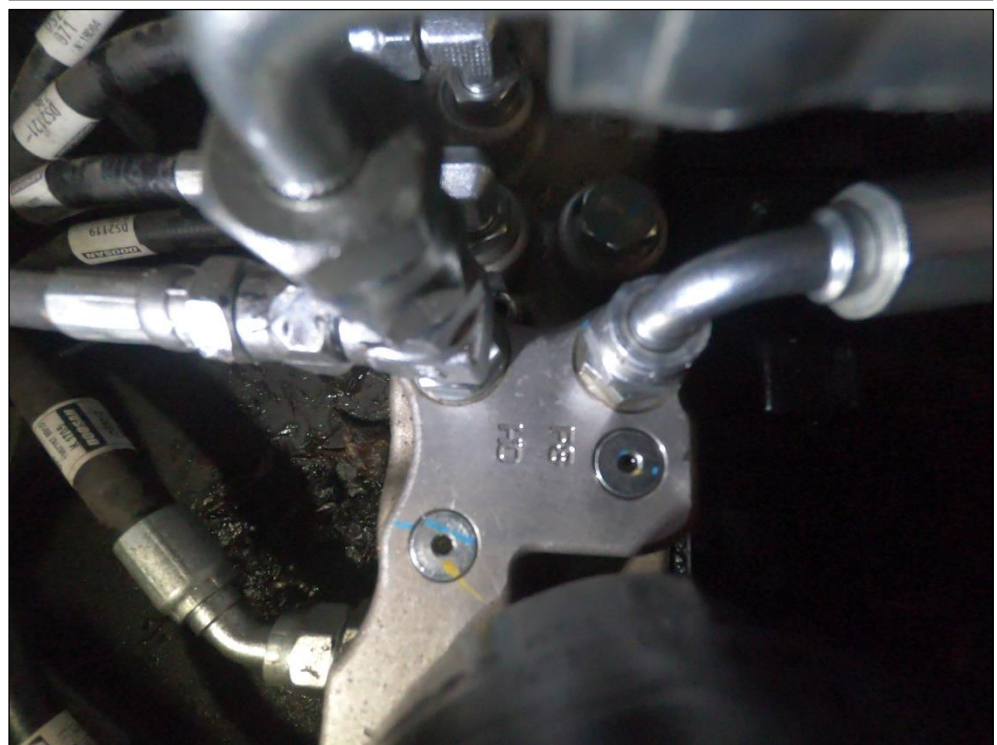
- ▶ Install the valve unit and the bracket for the timer (see position in image).



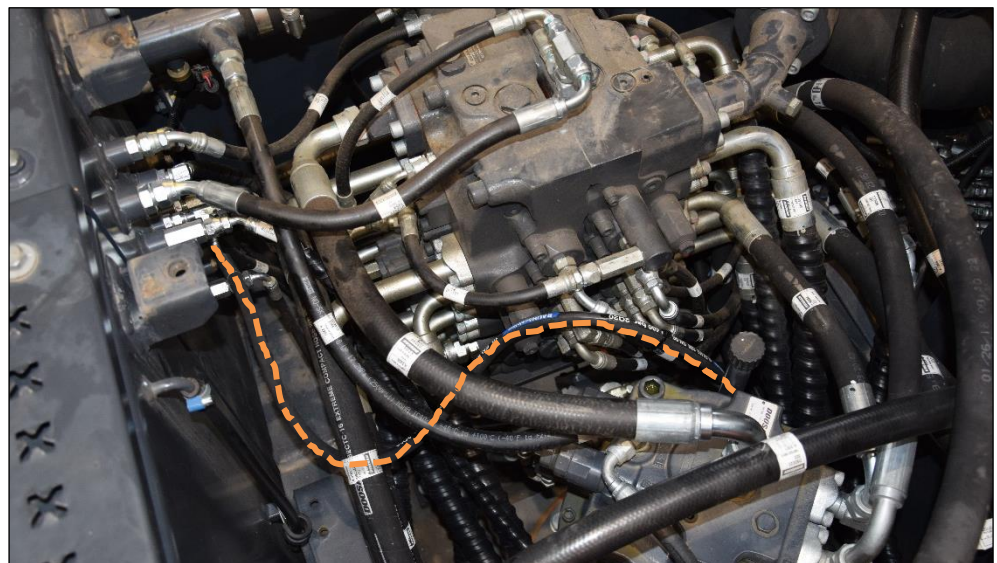
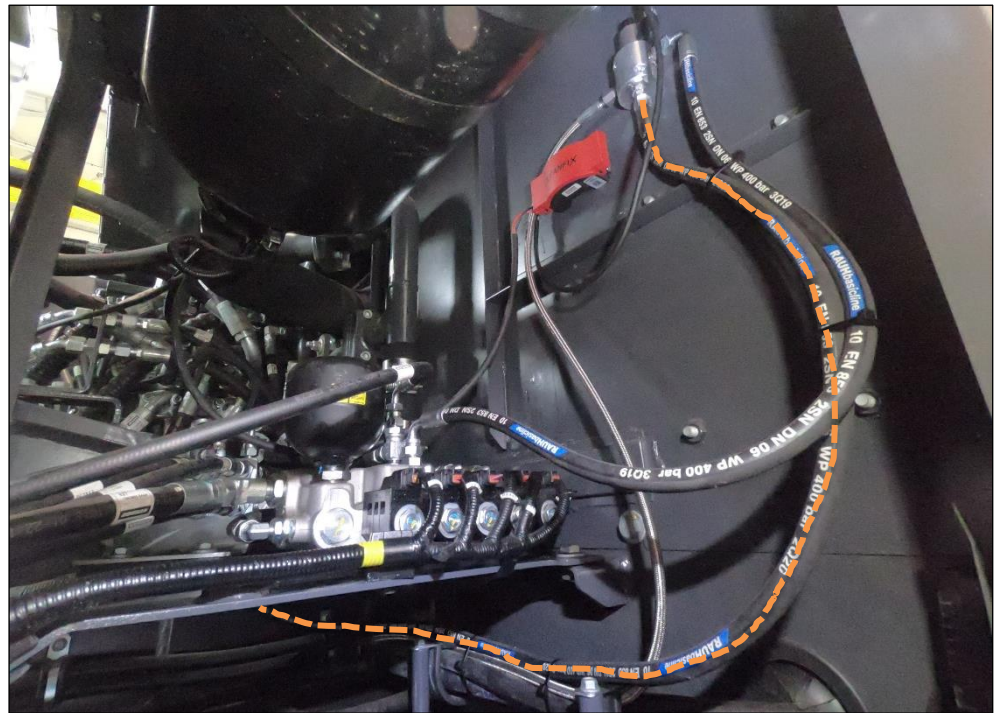
- ▶ Connect the hydraulic hose from the fan with the connection A at the valve
- ▶ Connect the 800mm hydraulic hose included in the kit to the P port of the valve
- ▶ Connect the 2800mm hydraulic hose included in the kit to the T port of the valve
- ▶ Connect the cable from the Timer with the valve



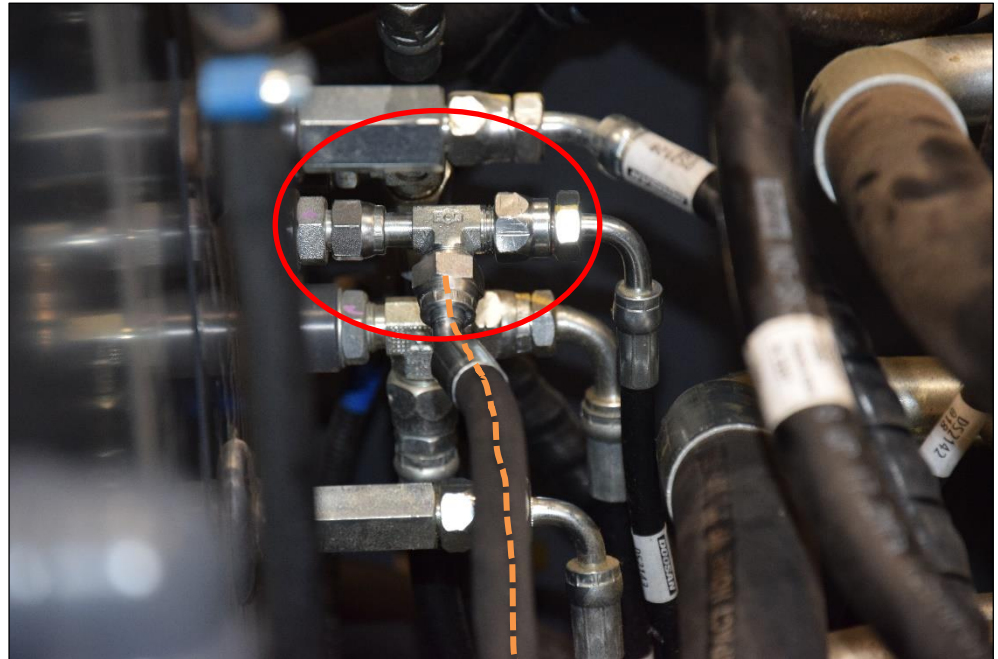
- ▶ Lead the 800mm hydraulic hose from the P port of the valve to the hydraulic solenoid valve package
- ▶ Make sure that the hydraulic system is depressurized
- ▶ Remove the filler plug P8 at the hydraulic solenoid valve package
- ▶ Install the straight screwed coupling included in the kit
- ▶ Connect the 800mm hydraulic hose from the P port of the valve to the port P8 of the hydraulic solenoid valve package



- ▶ Lead the 2800mm hydraulic hose from the T port of the valve to the hydraulic tank



- ▶ If there is no free connection on the hydraulic tank, use the tee adapter included in the kit to connect the hydraulic hose to the tank

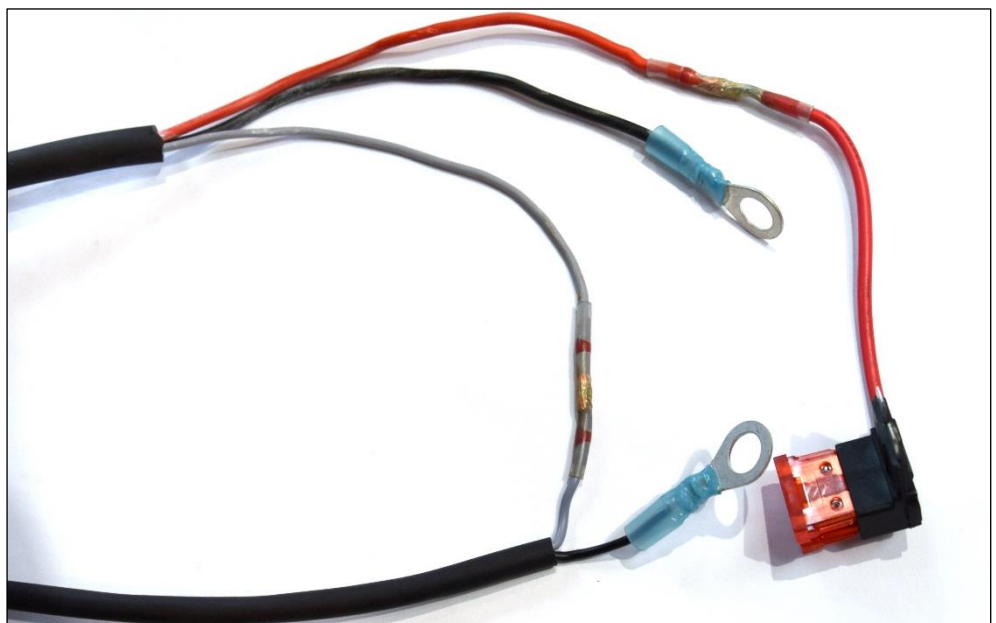


4.1.2 Installing the switch

- ▶ Lead the cable harness of the timer to cab of the machine



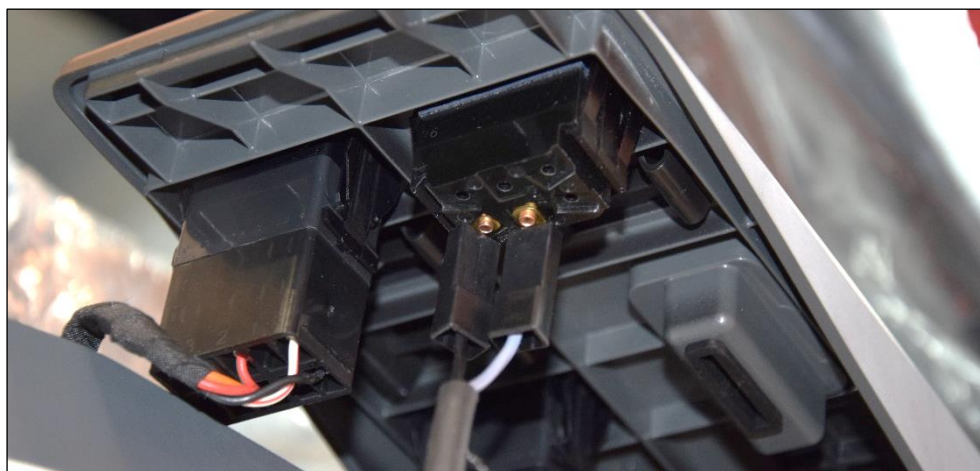
- ▶ Connect the red cable of the timer harness with a fuse (3A) to the keyed power (terminal 15)
- ▶ Connect the black cable of the timer harness to the ground (terminal 31)



- ▶ Carefully remove the cover plate for the switch from the connector holder using a screwdriver.



- ▶ Lead the cable harness for the switch to the opening
- ▶ Install the switch and connect the cable harness to it

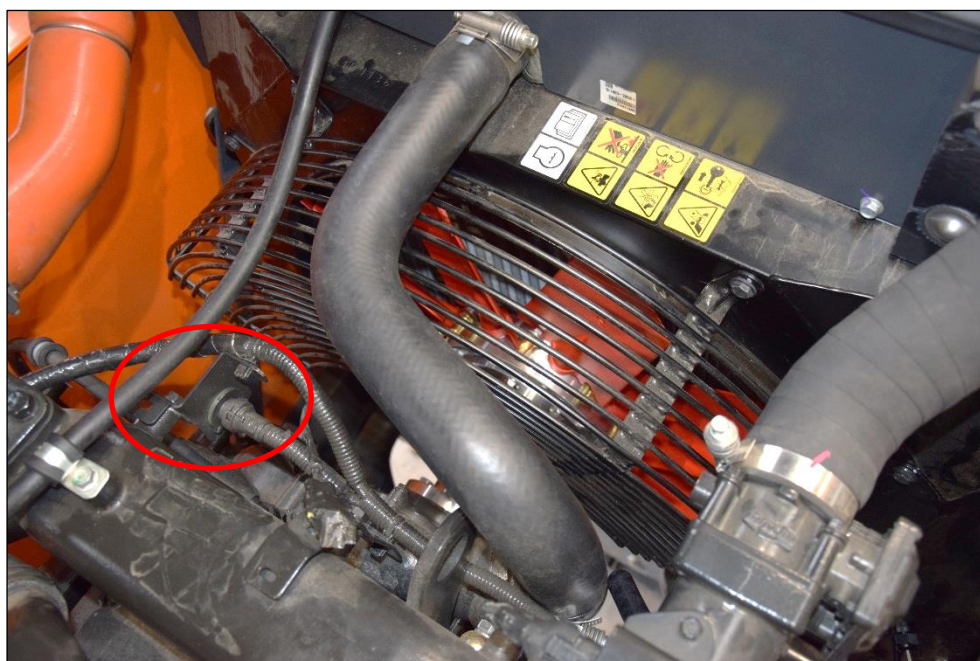


4.1.3 Installing the fan speed sensor

- ▶ Install the fan speed sensor in front of the radiator



- ▶ Connect the fan speed sensor between the fan and the ECU plug

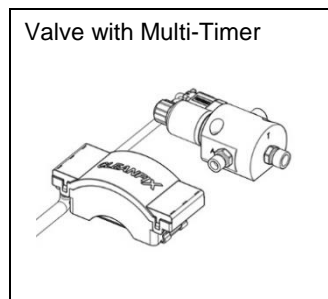


5 Operation

5.1 Initial start-up

- ▶ Start the engine.
- ▶ The first time you start up the fan, reverse it three times in neutral.
Then reverse the fan at gradually higher speeds from min. (3x 1,400 rpm) to max. (3x 1,800 rpm)

5.2 Valve with Multi-Timer / For vehicles with a hydraulic system in the vehicle



Switching from cooling to cleaning is time-controlled, for example, every 30 minutes. This period can be changed as desired. An intermediate cleaning can be carried out at any time by pressing the button.

6 Maintenance

6.1 Servicing the Cleanfix[®] reversible fan

Cleanfix[®] reversible fans are maintenance-free.

6.2 Servicing the Cleanfix[®] electrical components

Cleanfix[®] valve units are maintenance-free.

7 Troubleshooting

7.1 Troubleshooting Cleanfix® reversible fans

Error	Cause of error	Troubleshooting
1 Blades do not rotate to the cleaning position	1.1 No or low supply pressure	1.1.1 Check the pressure supply on the solenoid valve Pressure supply available to the solenoid valve → see 1.1.2 → When no pressure is applied to the solenoid valve, check the pressure supply (min. 20 bar / max. 50 bar).
		1.1.2 Check the solenoid valve is functioning If necessary connect external power supply (please note voltage 12 V or 24 V only) Solenoid valve switches (soft click) → see 1.1.3 → If the solenoid valve does not switch, replace the valve.
		1.1.3 Check the hose The hose from the solenoid valve to fan has no kinks or leaks → see 1.1.4 → In the case of leaks on the hose, the hose needs to be replaced. → When the oil intake assembly on the fan is leaking, an appropriate seal kit must be ordered.
		1.1.4 Mechanical failure If all the above conditions are met and the blades do not rotate, then it is a mechanical error. Then the fan must be sent to the manufacturer for review.
2 Blades do not turn back from the cleaning position to the cooling mode	2.1 Fan speed too fast	2.1.1 Reduce speed 2.1.2 Install more springs if possible
	2.2 Oil in the fan does not run back	2.2.1 Check the hose The hose from the solenoid valve to fan has no kinks or pinched positions → see 2.2.2 2.2.2 Check the solenoid valve See (1.1.2). 2.2.3 Mechanical failure If the fan with hose disconnected does not turn back from standstill, there is a mechanical failure. Then the fan must be sent to the manufacturer for review.