

## Maintenance: 500 Vario S4

**FENDT 512 Vario S4 Profi -  
ProfiPlus**

**FENDT 513 Vario S4 Profi -  
ProfiPlus**

**FENDT 514 Vario S4 Profi -  
ProfiPlus**

**FENDT 516 Vario S4 Profi -  
ProfiPlus**





## MAINTENANCE

### **FENDT 512 Vario**

From chassis no. 435 .. /21/101

### **FENDT 513 Vario**

From chassis no. 436 .. /21/101

### **FENDT 514 Vario**

From chassis no. 437 .. /21/101

### **FENDT 515 Vario**

From chassis no. 438 .. /21/101

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# 1. SAFETY INSTRUCTIONS

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## 1.1 Introduction

### 1.1.1 Safety instructions: Introduction

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**WARNING:**

**Before using the tractor, the operator must understand the instructions contained in this chapter. These regulations must always be adhered to when work is carried out.**

**NOTE:**

*This Operator's Manual is published and distributed across various markets. The availability of the components referred to - whether as part of the standard equipment or as an accessory - can vary depending on the country or region concerned. If you would like to know what equipment features are available in your region, you should contact your FENDT dealer.*

Under normal conditions, this Operator's Manual should enable the owner and operator to operate the tractor safely. If these instructions are followed, the tractor, like all FENDT products, will provide faithful service for many years.

The FENDT dealer's commissioning at the operator's site ensures that you understand both the operating and service instructions. You should contact your FENDT dealer if you do not understand any parts of this Operator's Manual. It is essential that these instructions are understood and observed.

The instructions do not contain all of the safety and operating instructions for the implements and accessories that can be fitted at the time of and after delivery of the tractor. It is imperative that the operator understands and uses the operating instructions for these implements and the accessories.

**IMPORTANT:**

*This manual must always be kept in the tractor. You can obtain a copy of this Operator's Manual from your FENDT dealer.*

This chapter of the Operator's Manual contains a description of specific safety-related standard situations that can arise when operating the tractor and during normal maintenance. You are also given all of the information required on the correct behavior to adopt in these situations.

This chapter is supplementary to the safety instructions contained in other chapters of this Operator's Manual.

Depending on the implements used and the working conditions on site or in the operating area, additional precautionary measures may need to be taken. FENDT has no direct influence on the commissioning, operation, inspection, lubrication or maintenance of the tractor. YOU are therefore responsible for the adoption of appropriate safety measures in the areas concerned.

### 1.1.2 General safety instructions

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**Notes on disposal of material during tractor maintenance.****WARNING:**

**Contaminating effluent, watercourses or the ground is prohibited. Approved plants, waste dumps or repair workshops that have the proper facilities for the disposal of used oil must be used. If in doubt, seek advice from the relevant authority.**

**Decals.****WARNING:**

**Do not remove any warning decals. Removing warning decals could lead to you or other people not recognizing dangers. As a result, you or other people could be injured.**

**Substances that are harmful to health.**



**WARNING:**

**No substances that are harmful to health or abrasive may be stored or transported in the cab. Gases and liquids can escape, even if completely sealed containers are used. This can affect both your concentration during a journey and your health. In addition, electrical components (e.g. control units and connectors) can be damaged. This can result in faults, system failures or short circuits, which can start a fire. This, in turn, can cause an accident, putting you or other people in danger.**

No substances that are harmful to health or abrasive may be stored or transported in the cab. This includes:

- Solvents
- Fuel
- Oils and lubricants
- Cleaning agents
- Acids

**Environmental protection**

FENDT is committed to comprehensive environmental protection.

Our aims are to ensure the economical use of resources and the considerate handling of natural resources that must be preserved in the interests of both people and nature.

By operating your tractor in an environmentally friendly way, you can also contribute to protecting the environment.

Fuel consumption and wear to the engine, transmission, brakes and tires depend on the following factors:

- The operating conditions of the tractor.
- Your personal driving style.

You can influence both of these factors.

To do so, observe the following instructions and operating conditions:

- Ensure the correct tire pressure is used.
- Do not carry any unnecessary weight.
- Monitor fuel consumption.
- Do not use the throttle when starting the tractor.
- Do not leave the engine idling to warm it up.
- Avoid frequent, intense acceleration.
- Regularly servicing your tractor will protect the environment. Therefore, observe the maintenance intervals.

Always have service work performed at a specialist FENDT workshop.

## 1.2 Safety - symbols and terms used

### 1.2.1 Safety - symbols and terms used

#### Signal



This safety sign means CAUTION! BE ALERT! YOUR SAFETY DEPENDS ON IT!

The safety sign indicates important safety notes on machines and safety stickers and in operating instructions and other places. If you see this sign be aware that there is a risk of injury or death. Observe the instructions in the safety notes.

#### **SAFETY has top priority! Why?**

- ACCIDENTS CAN RESULT IN SERIOUS INJURY OR DEATH
- ACCIDENTS COST A LOT OF MONEY
- ACCIDENTS ARE AVOIDABLE

#### Designations

The terms DANGER, WARNING and CAUTION are used together with the safety warning symbol. It is essential that these safety warnings are understood and the recommended safety measures and instructions observed.



#### **DANGER:**

**This symbol together with the word DANGER means there is an immediate risk of danger that must be prevented to avoid the risk of DEATH OR SERIOUS INJURY.**



#### **WARNING:**

**This symbol together with the word WARNING means there is a potential danger that must be prevented to avoid the risk of DEATH OR SERIOUS INJURY.**



#### **CAUTION:**

**This symbol together with the word CAUTION means there is a potential danger that must be prevented to avoid the risk of MINOR INJURY.**

The terms IMPORTANT and NOTE do not refer directly to your personal safety; rather they convey additional information and tips for operation or maintenance of the machine.

#### **IMPORTANT:**

*Refers to special instructions or procedures that can result in damage to or destruction of the tractor, its equipment or the surrounding area if they are not observed.*

#### **NOTE:**

*Refers to particular information that enables more effective and easier operation or repair.*

## 1.3 Special safety instructions for tractor maintenance

### 1.3.1 General maintenance instructions



**WARNING:**

Always read and observe the relevant sections of the Operator's Manual and any other technical documentation before performing any repairs or maintenance work.



**WARNING:**

Familiarize yourself with any legal requirements before all maintenance and repair work, particularly the work safety and accident prevention regulations.



**WARNING:**

Always have service work performed at a specialist FENDT workshop. These workshops have the necessary expertise and tools for the required work. Safety-related work and work on safety-related systems must be carried out by a specialist FENDT workshop.



**WARNING:**

Before any maintenance and repair work and before opening the engine cover, switch off the engine and remove the ignition key.

Apply the handbrake and place chocks underneath the wheels if necessary.

Disconnect the battery (negative terminal) when working on the engine.

Replace safety equipment following maintenance work. Ensure that the tractor is securely parked

Ensure that the oil and fuel are of the prescribed quality and store them both in permitted containers only.

Do not perform any welding, drilling, cutting or grinding work on the cab or safety frame. Replace damaged parts.

**IMPORTANT:**

*If, for operational reasons, you need to carry out individual maintenance tasks independently, observe the valid country-specific environmental protection measures. The legal stipulations must be observed when disposing of fuel and lubricants such as engine oil. This also applies to all parts, e.g. filters, that have come into contact with fuel and lubricants. Dispose of empty containers, cleaning cloths and maintenance products in an environmentally friendly manner. Observe the instructions for use of maintenance products. Do not leave the engine running for longer than is necessary.*

**IMPORTANT:**

*Before carrying out any maintenance work, thoroughly clean the tractor. This is particularly important for connections and components that need to be loosened and the surrounding areas. Used oil, coolant and brake fluid must be disposed of properly. Current legislation and the instructions of the fluid manufacturer must be observed. For maintenance intervals, work to be performed and the quantity and quality of fuels and lubricants to be used, refer to "Fluids and lubricants" or "Maintenance schedule".*

**NOTE:**

*Like all technical equipment, the tractor requires care and maintenance. The scope and frequency of maintenance work depends primarily on the often broadly varying operating conditions. The specialist FENDT workshop confirms the work carried out in each case in the maintenance manual. Always have service work carried out at a specialist FENDT workshop, as these workshops have the necessary expertise and tools for the work required. Safety-related work and work on safety-related systems must be carried out by a specialist FENDT workshop. The guarantee includes experiences and regular technical instructions from the factory, along with fittings and tools for professional tractor maintenance that is based the latest knowledge.*

**Spare parts**

Ensure spare parts are suitable for your tractor. In many countries, parts that change the tractor will invalidate your operating license if:

- the vehicle type approved in the operating license is changed
- road users are put in danger

- the exhaust or noise levels are made worse.

The use of unauthorized parts can negatively influence vehicle safety.

For this reason, use only genuine FENDT spare parts.

### General notes on maintenance

- Switch the engine off and remove the key before maintenance and repair work. Relieve pressure from implement lines, e.g. to the front loader.
- Keep clear of any suspended, unsecured loads (lifted cab etc.).
- Never open or remove any safety devices while the engine is running.
- Never handle leaking pressure lines. Fluids (fuel or hydraulic oil) escaping under high pressure can penetrate the skin and cause severe injuries. If this should occur, seek medical advice immediately to avoid the risk of serious infection.
- Keep at a safe distance from hot areas.
- The pressure accumulator and connected lines are highly pressurized. Only remove and repair in accordance with instructions set out in the Technical Manual.
- To avoid eye injury, do not look directly at the surface of the activated radar sensor.
- Dispose of oil, fuel and filters properly!
- Specialist knowledge and special fitting tools are required to fit tires.
- Run the tractor for a short time, then retighten all wheel nuts and bolts and check them regularly.
- Before working on the electrical system, always remove the earth strap from the battery. Observe the following when carrying out electric welding. Before performing welding work on tractor or mounted implements, ensure that both battery terminals are disconnected. Attach the earth terminal as close as possible to the welding point.

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### 1.3.2 Special instructions for cleaning the tractor

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Before cleaning the tractor, always observe the following:

- Follow the obligatory steps when leaving the tractor.
- Remove implements, buckets, chains and hooks or clear them out of the way.
- Remove debris from side steps, pedals and the cab floor. Remove any grease and oil and brush off any dust and mud. Scrape off snow and ice in the winter.



**DANGER:**

**Keep the side steps, pedals and the cab floor clean. Slippery or iced-up surfaces on side steps, pedals or the cab floor can result in serious accidents.**

- When washing the tractor with a hose, the water jet must not be aimed directly at electrical and electronic components.
- When using a high-pressure cleaner, a sufficient distance from the tractor must be maintained so that neither paintwork nor seals are damaged.
- Ensure that the working areas and the engine compartment are clean.
- After cleaning, lubricate all lubrication points, door hinges and bearings.

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### 1.3.3 Obligatory steps to be taken before leaving the tractor

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**DANGER:**

**Serious or fatal injury caused by vehicle/implement movements Operation of controls for the tractor and implements by unauthorised people in the cab, especially children, can result in serious or fatal injury. Do not permit unauthorised persons, particularly children, to be alone in the cab.**

Before leaving the cab, the following points must always be observed irrespective of the time of day:

**Procedure**

1. Never leave the tractor unattended while the engine is running.
2. Before leaving the tractor, engage neutral and secure the tractor to prevent it rolling away by applying the park brake.
3. Deactivate the PTO.
4. Lower the implements.
5. Switch the engine off.
6. Remove the ignition key and lock the cab if necessary.
7. When the driver leaves the tractor, no other persons may remain in the cab

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## 2.1 General

**WARNING:**

**Before any maintenance and repair work and before opening the bonnet, switch off the engine and remove the ignition key. Apply the hand brake and chock the wheels, if necessary. When working on the engine, disconnect the battery (negative terminal). When the maintenance work is complete, replace all protective devices. Ensure that the tractor is securely parked. Ensure that the correct grades of oil and fuel are used, and store these in approved containers only. See also TECHNICAL DATA "Fluids and Lubricants". Do not carry out any welding, drilling, cutting or grinding on the cab or safety frame. Replace any damaged parts.**

**IMPORTANT:**

*Before carrying out any maintenance work, thoroughly clean the tractor. This is particularly important for connections and components that need to be loosened and the surrounding areas. Used oil, coolant and brake fluid must be disposed of properly. Current legislation and the instructions of the fluid manufacturer must be observed.*

*Oil level checks must be conducted when the tractor is level and stationary; lock any front axle suspension. For maintenance intervals, work to be performed and the quantity and quality of fuels and lubricants to be used, refer to "Fluids and lubricants" or "Maintenance schedule".*

## 2.2 Bonnet

### 2.2.1 Open the bonnet



**DANGER:**

**When opening or closing the bonnet, there is a risk of injury or damage to objects in the pivot area of the bonnet. Make sure that there are no people or objects in the pivot area of the bonnet.**

**NOTE:**

*If the tractor has been fitted with a front power lift, remove top link.*

**Procedure**

1. Release latch (A) (unlock with the ignition key).
2. Use the handle (B) to raise the bonnet.

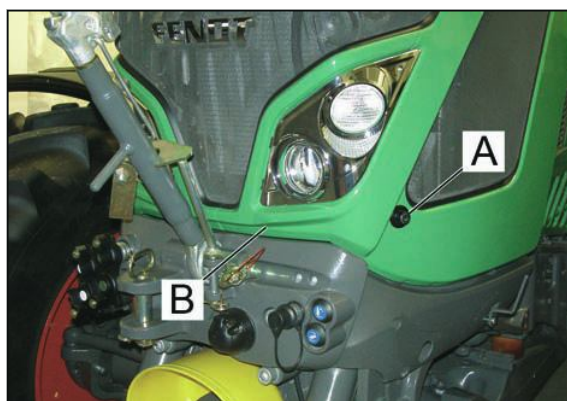


Fig. 1

### 2.2.2 Close the bonnet

**Procedure**

1. Swing the bonnet closed.

**NOTE:**

*Check that the bonnet is correctly latched.*

*If the bonnet can be raised slightly, it is not correctly latched*

*Raise the bonnet again and let it fall with a little more force.*

2. Latch (A) can be locked again with the ignition key.

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