

# ErgoSteer Joystick Steering

SP001V9810010  
SP001V9810020





## Dear customer

Please note the following:

**This operator's manual is only valid in conjunction with the operator's manual for the vehicle.**

- Before using the machine, carefully read through the operator's manual and familiarise yourself with all operating controls and their functions before you begin work. This also applies to the operator's manual for implements.
- Observe all the operating and maintenance instructions. If you do so, your machine will give you many years of cost-effective and fault-free operation. You will find an overview of all maintenance operations in the maintenance schedule in this maintenance manual.
- Maintenance and repair work should only be carried out at your service workshop.

Disregarding the symbols and the associated safety instructions, which are divided into three hazard levels, can lead to considerable damage to the machine, the mounted implements or other property. Adhering to the safety instructions is also required in order to prevent such damage from occurring.

## Authorized use

This steering joystick is designed exclusively for use in standard agricultural applications or for similar purposes. Any other type of use is considered unauthorized. The manufacturer will not be liable for any damage resulting from such use, which will be entirely at the owner's risk.

Authorized use also includes observing the operating, maintenance and repair conditions set out by the manufacturer in order to protect your claims under warranty if necessary.

Special attention must be paid to safety instructions marked with this symbol, as well as the words DANGER, WARNING and CAUTION.

Operation, maintenance and repair of the steering joystick may only be carried out by people who are familiar with this equipment and aware of the associated dangers.

The relevant accident prevention regulations must be observed, as must as any generally acknowledged safety, industrial medicine and traffic regulations. The manufacturer does not accept liability for damage resulting from unauthorized modifications to the machine.

As it is working equipment, children and young people should not be taken on board or transported on the vehicle. However, if children or young people are in the vehicle, the operator must be aware that they require strict supervision. Children and young people on board must not be allowed to operate the technical controls of the vehicle or implements mounted on it. Under no circumstances may children or young people remain alone in the cab when the operator leaves the vehicle.

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# ErgoSteer

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# 1 Safety

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## **1.1 Operator's Manual and safety instructions**

It is published and distributed in all markets. The availability of the described components, whether as part of the standard equipment or as accessories, may however vary depending on the country or region. Therefore, if you would like to know what equipment features are available in your region, please contact your FENDT dealer.

Under normal conditions, the Operator's Manual should enable the operator and the driver to operate the vehicle safely. If these instructions are followed, the vehicle can be operated reliably and safely for many years, as is typical of all FENDT products.

You can obtain a copy of the latest Operator's Manual from your FENDT dealer.

During commissioning by the FENDT dealer, it is ensured that the operating and service instructions provided have been understood by the operator. The operator is obliged to train staff in the operating and/or service instructions. If there is anything in the Operator's Manual that you do not understand, please contact your FENDT dealer. Make sure you have read and understood all instructions and information in the Operator's Manual before you operate the vehicle for the first time.

Observe all instructions and information in the Operator's Manual at all times. However, 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 vehicle. Depending on the implements used and the working conditions on site or in the operating area, it may therefore be necessary to take additional precautionary measures.

FENDT has no direct influence on the commissioning, operation, inspection, lubrication or maintenance of the vehicle. The operator, user and/or maintenance personnel are therefore responsible for taking appropriate safety measures in the areas concerned.

This "Safety" chapter of the Operator's Manual contains a description of specific standard safety-related situations that can arise when operating the vehicle and during normal maintenance. It also contains vital information on the correct behaviour in a number of different situations.

This chapter contains fundamental and specific safety information that must be observed in addition to the safety instructions in the other chapters of the Operator's Manual. Make sure you have read and understood the "Safety" chapter completely before reading the other chapters in the Operator's Manual.

## 1.2 Warning symbols and terms used

### Warning symbol



This warning symbol means **CAUTION! BE ALERT! YOUR SAFETY DEPENDS ON IT!**

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

### Safety has top priority! Why?

- ACCIDENTS CAN RESULT IN SERIOUS INJURY OR DEATH
- ACCIDENTS RESULT IN FINANCIAL AND OTHER MATERIAL LOSSES
- ACCIDENTS ARE AVOIDABLE

### SIGNAL WORDS AND SEVERITY OF THE RISK

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



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



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



**CAUTION:** The warning symbol together with the word **CAUTION** means there is 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 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 Compliance with the Operator's Manual

During commissioning by the FENDT dealer on the premises of the operator, it is ensured that the operating and service instructions provided have been understood by the operator. The operator is obliged to train staff in the operating and/or service instructions. If you do not understand parts of this Operator's Manual, please contact your FENDT dealer.



**WARNING: Serious injury or death caused by inadequate compliance with the operators manual.**

**Inadequate compliance with the operators manual can cause damage, injuries and in serious cases death.**

**Before operation, make sure that this operators manual is available on the vehicle in legible form. The owner is responsible for providing adequate training to those personnel who are entrusted with the vehicle, and where applicable, the service manual. The same applies to those persons who are both owner and operator. Moreover, sufficient experience of the vehicle's various functions and all of the accessory parts and implements is essential.**

**Make sure that the vehicle is operated only by persons who know how to handle agricultural vehicles. Under no circumstances are children or unqualified persons allowed to operate the vehicle or any implements. Adequate training in all functions and the risks associated with the vehicle is a prerequisite for use. Before using the vehicle and any additional devices, make sure that all safety information and regulations are known and understood. In case of doubt or in the event of any problems in understanding the information, always consult the dealer.**

## 1.4 Safety instructions for the steering joystick

**IMPORTANT:** *This Operator's Manual is a general guide.*

*It is important to read and understand the specific instructions and recommendations of the manufacturer of the steering joystick to make sure of its safe installation and use.*

- NO passengers are to be let on the instructor seat when the joystick steering is in use.
- Only use the joystick steering in the field. Do not use the steering joystick on the road.
- The steering joystick is not to replace the steering wheel, but to provide an extra function. Observe the steering wheel at all times and have instant access to it when needed.
- Do not use the steering joystick when distracted or tired. The driver's full attention is required when operating the tractor.
- Make sure the steering joystick is free of dirt, dust, or any other material that could affect the correct operation.
- Perform regular maintenance and safety checks on the steering joystick and connecting cables to ensure they are in good working order.
- In the event of problems or irregularities in the steering, contact your dealer immediately to determine the cause and have it rectified.

## **1.5 Adjust the operator's seat and the steering joystick armrest**

If the joystick armrest setting is incorrect, it can hit the steering wheel or cab components.

When you turn the seat and the side horizontal suspension is open, it can occur more frequently.

Before you turn the operator's seat:

- Do a check of the clearance of the steering joystick armrest to the other components in the cabin.
- Adjust the operator's seat settings to increase the clearance of the components in the cabin.

## 1.6 Safety decals on the steering joystick

The position of the safety decal is on the left side of the steering actuator housing.

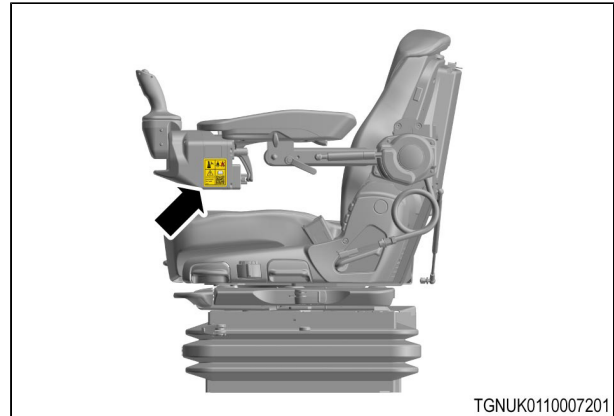


Fig. 1



**DANGER:** Do not use the steering joystick on the road.

Only use the joystick steering in the field.



**DANGER:** NO passengers are to be let on the instructor seat when the joystick steering is in use.

**NOTE:** Scan the QR code in the illustration to visit the product website. Here you will find the operating instructions as well as useful additional information.



Fig. 2

## 2 Introduction

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## 2.1 Function brief description

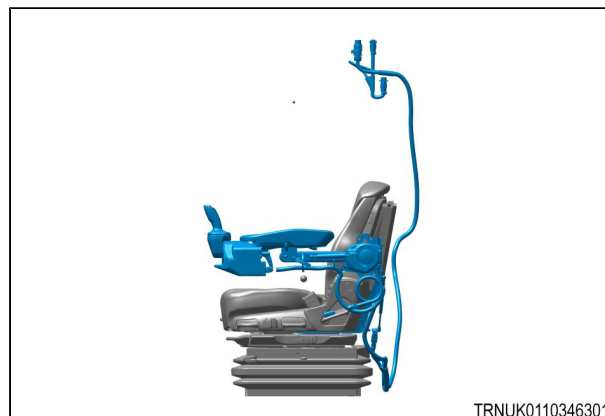
Machines of the 500 Gen4 series, which are equipped with a mechanical parking brake ex works, must be retrofitted with a pneumatic parking brake.

The steering joystick retrofit solution is compatible with the Fendt 500 to 1000 Vario series with the equipment features FendtOne drivers work place and the product lines Power+ and Profi+.

The installation of the retrofit solution on the machine is described in separate installation instructions/video depending on the seat variant. The relevant machines must be equipped with the vehicle software as of Nov. 2023 EOL or newer. Installation is via 'Plug & Play' and no additional software activation is required.

## 2.2 Overview of the armrest and joystick steering components

Components of the joystick steering retrofit solution



TRNUK0110346301

**Fig. 1**

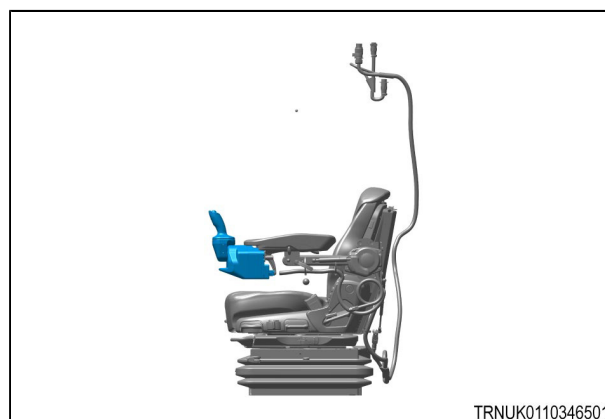
Armrest



TRNUK0110346401

**Fig. 2**

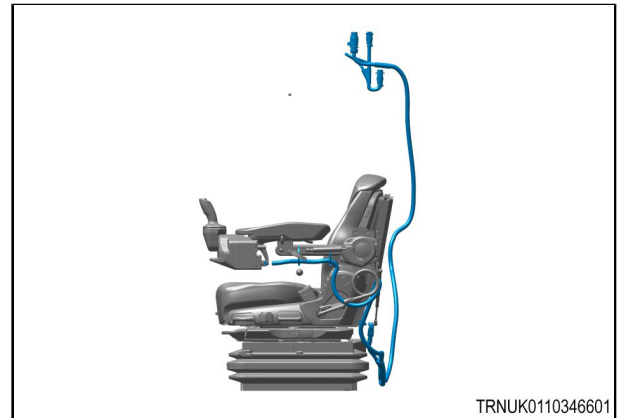
Joystick steering unit



TRNUK0110346501

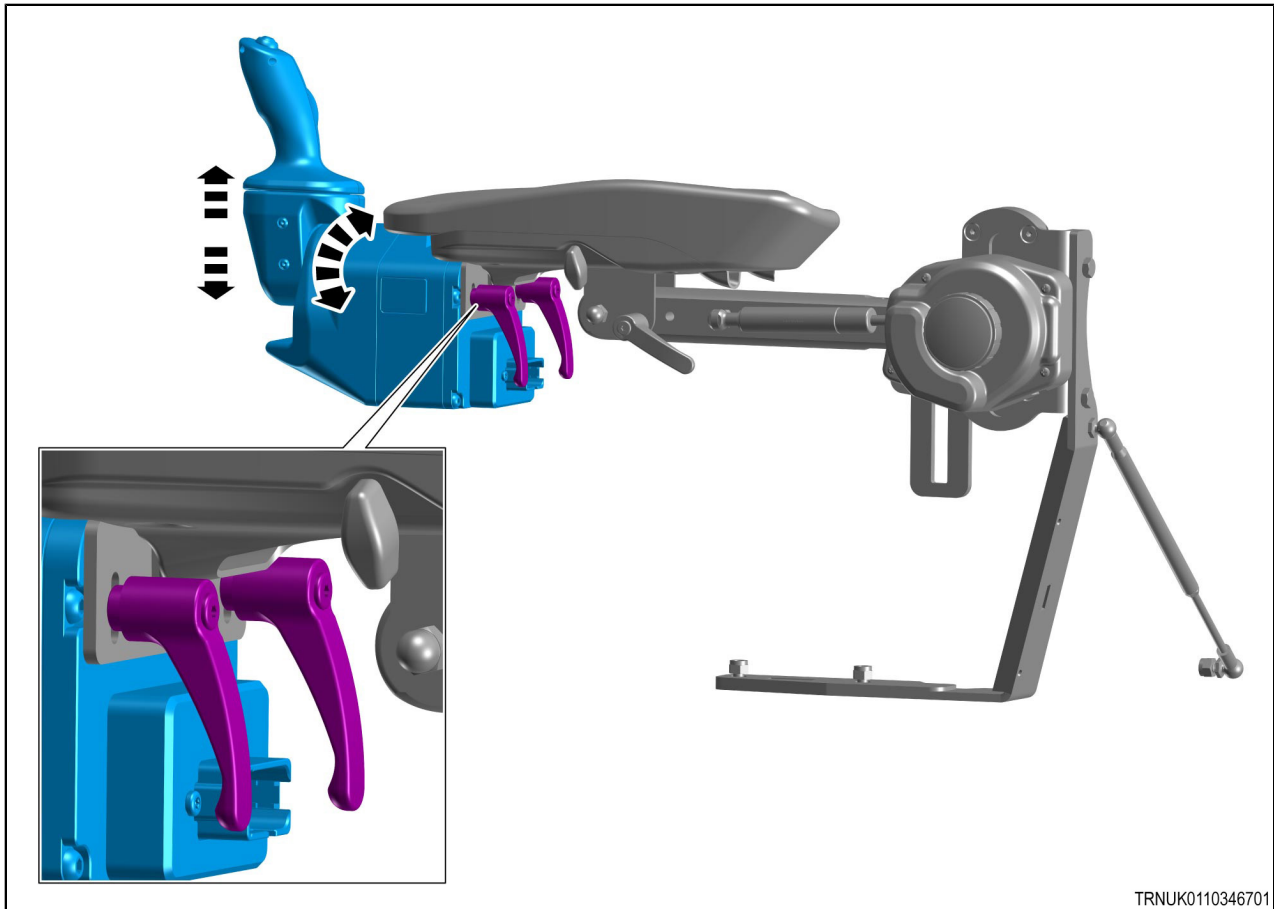
**Fig. 3**

Wiring harness with ISOBUS and power connection



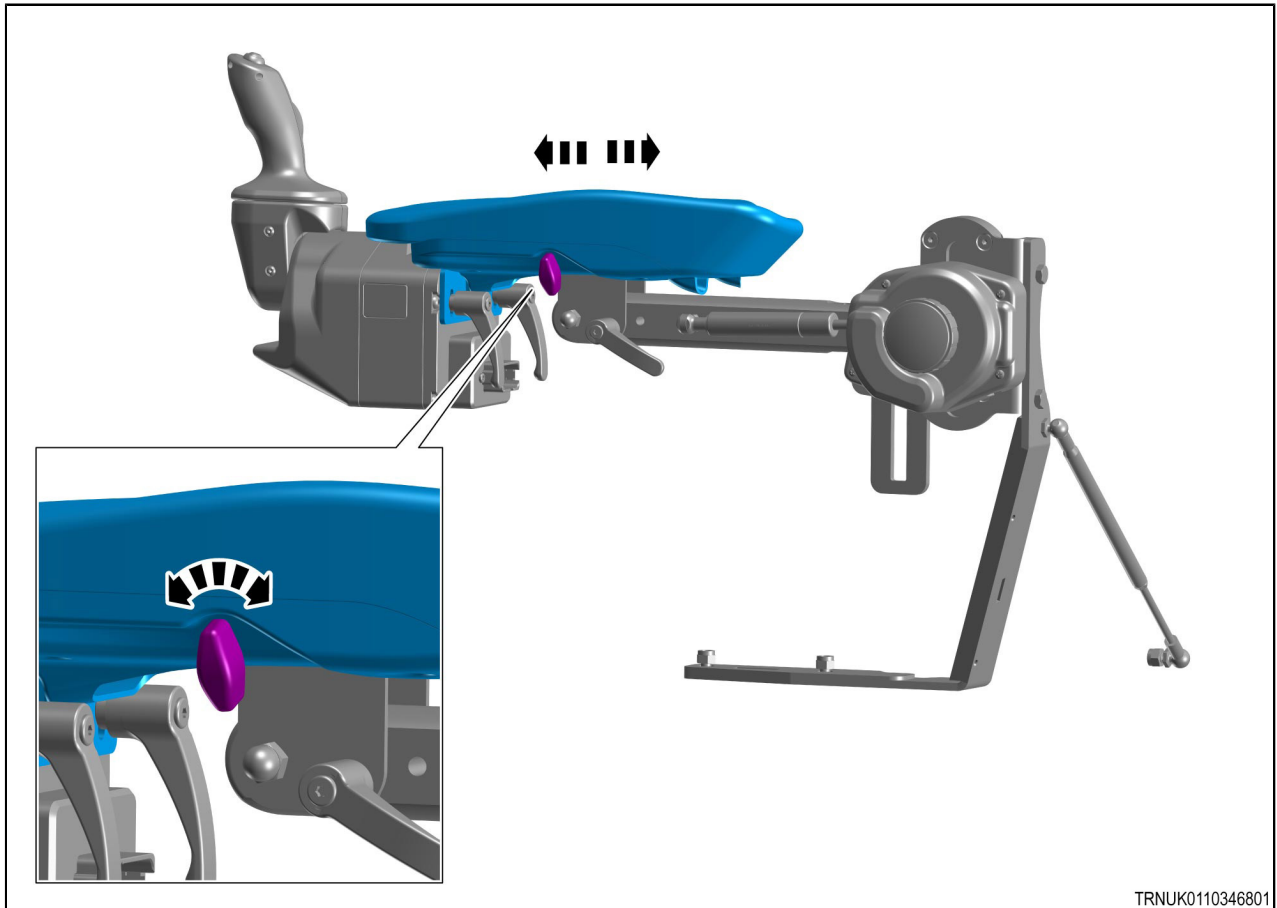
**Fig. 4**

### 2.3 Adjustments of the armrest and the joystick steering unit



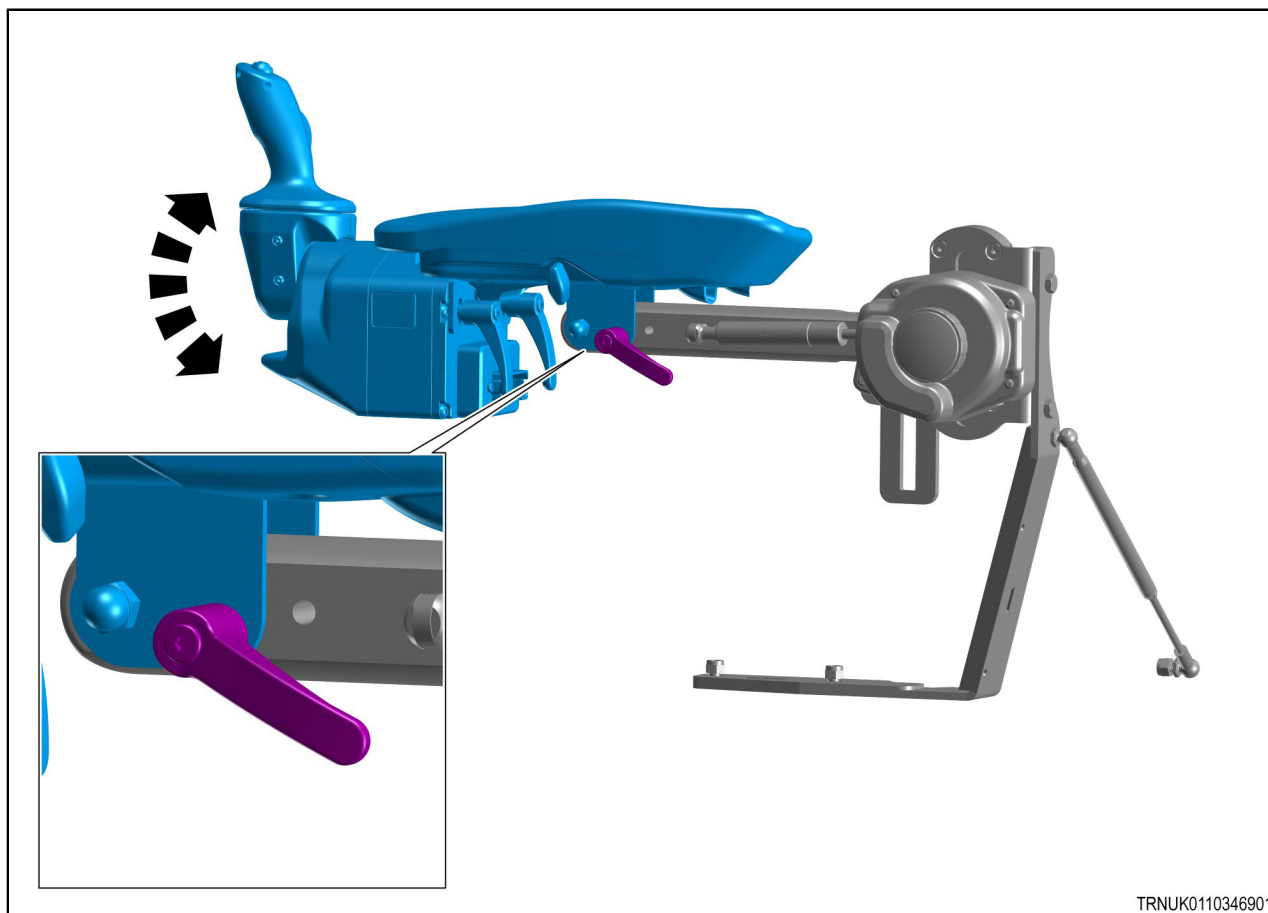
**Fig. 5**

The steering joystick unit can be adjusted in height and inclination in relation to the armrest using the two quick-release fasteners in the elongated holes.



**Fig. 6**

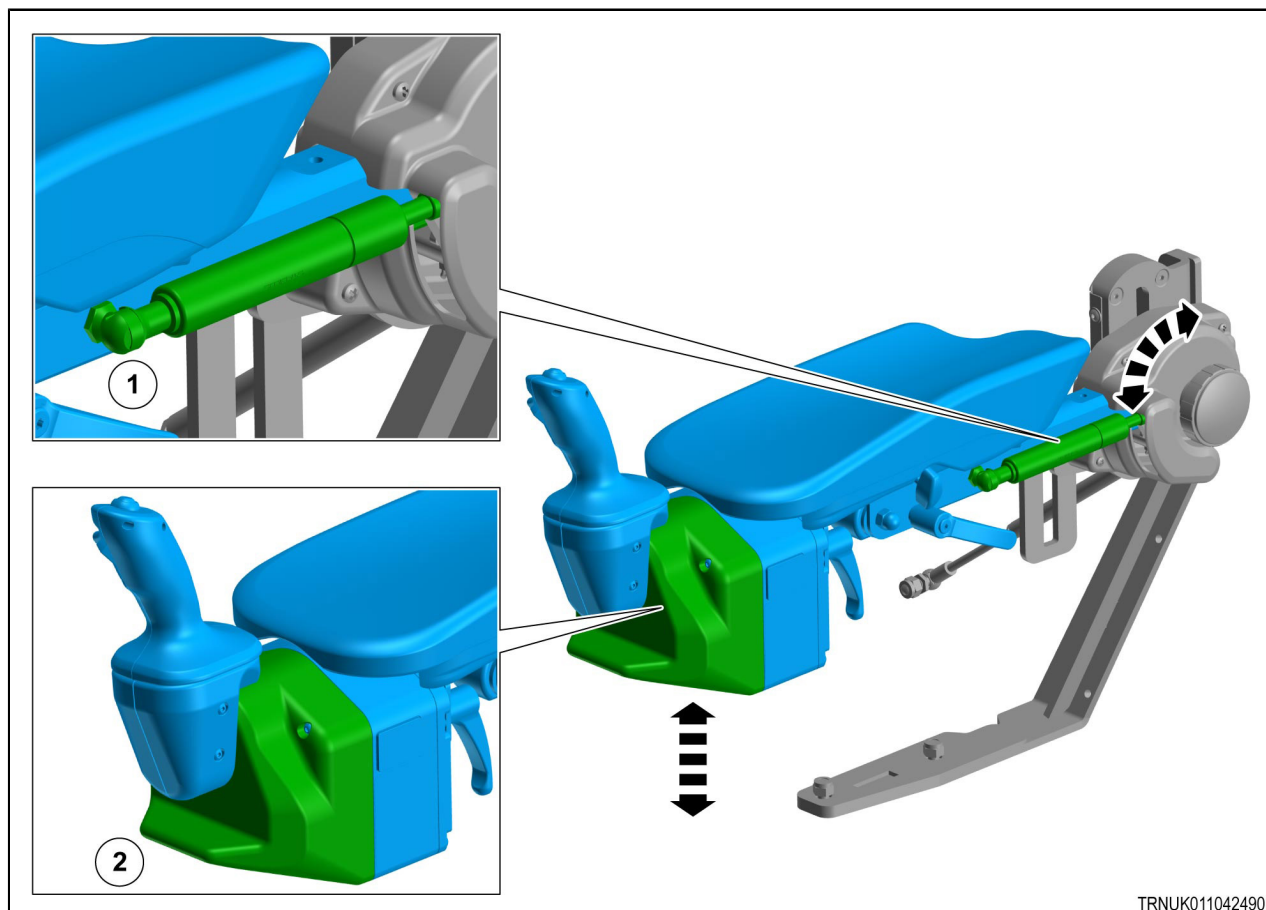
The length adjustment of the arm rest is done via the screw cap.



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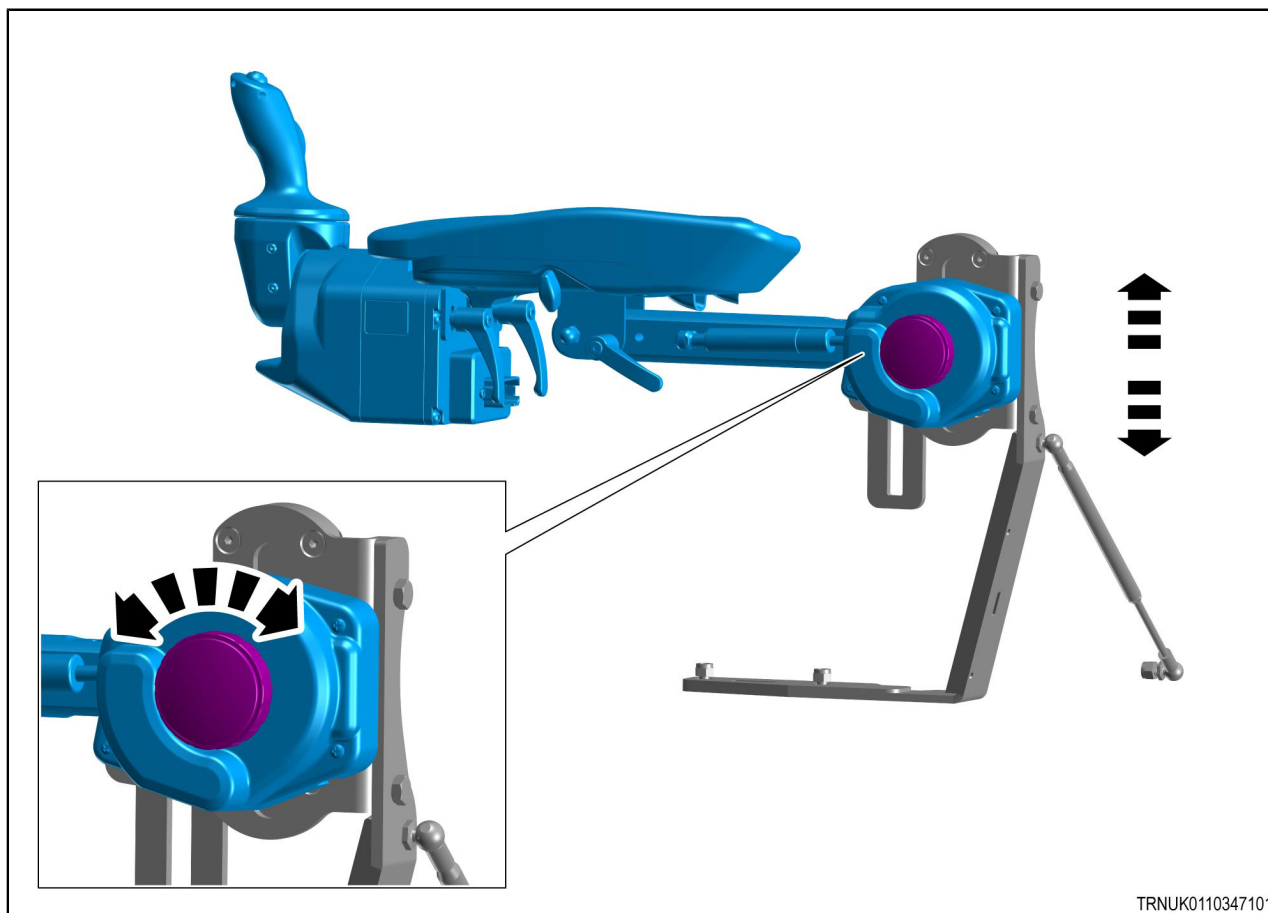
**Fig. 7**

The inclination of the armrest can be adjusted using the quick-release fastener.



**Fig. 8**

Use the handle (2) to lift or lower the armrest against the resistance of the damper (1).



TRNUK0110347101

**Fig. 9**

The height of the entire armrest can be adjusted with the rotary knob. Hold armrest, open the knob, adjust the armrest, close the knob again.

## **2.4 Installation**

Please get in contact with your dealer for assembly and the commissioning.

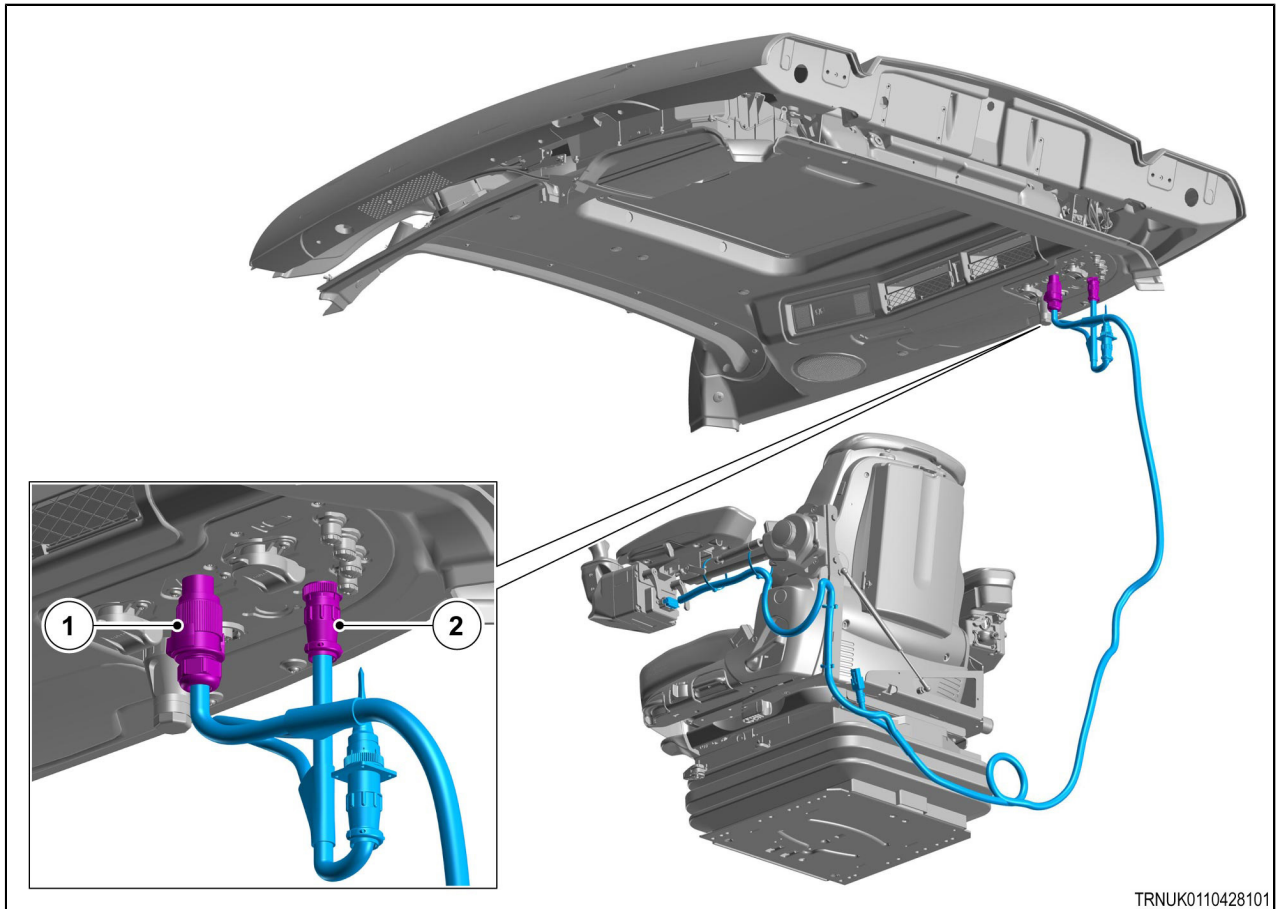


## 3 Operation

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### 3.1 Prerequisites for using the steering joystick



TRNUK0110428101

**Fig. 1**

- Make sure that the joystick wiring harness is attached with the retaining clip.
- Lay the joystick cable so that it is not kinked or crushed.
- Adjust the steering wheel so that you can intervene in an emergency situation.
- Connect the joystick electrical connector (1) to the 25 A socket on the machine.
- Connect the joystick electrical connector (2) to the ISOBUS socket on the machine.

## 3.2 Activation and settings of the steering joystick

Make sure the **ISO BUS** system is enabled **ON**.

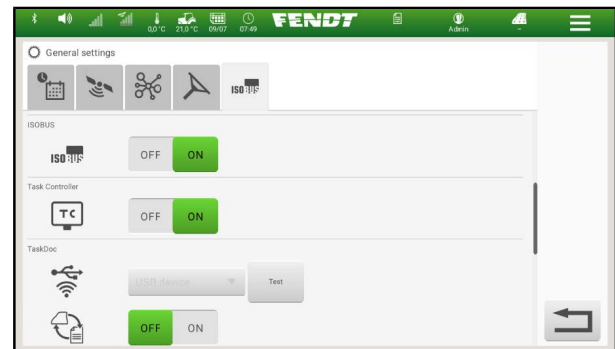


Fig. 2

Navigate the terminal to the system setup for steering.



Pre-activate the joystick steering by selecting the icon

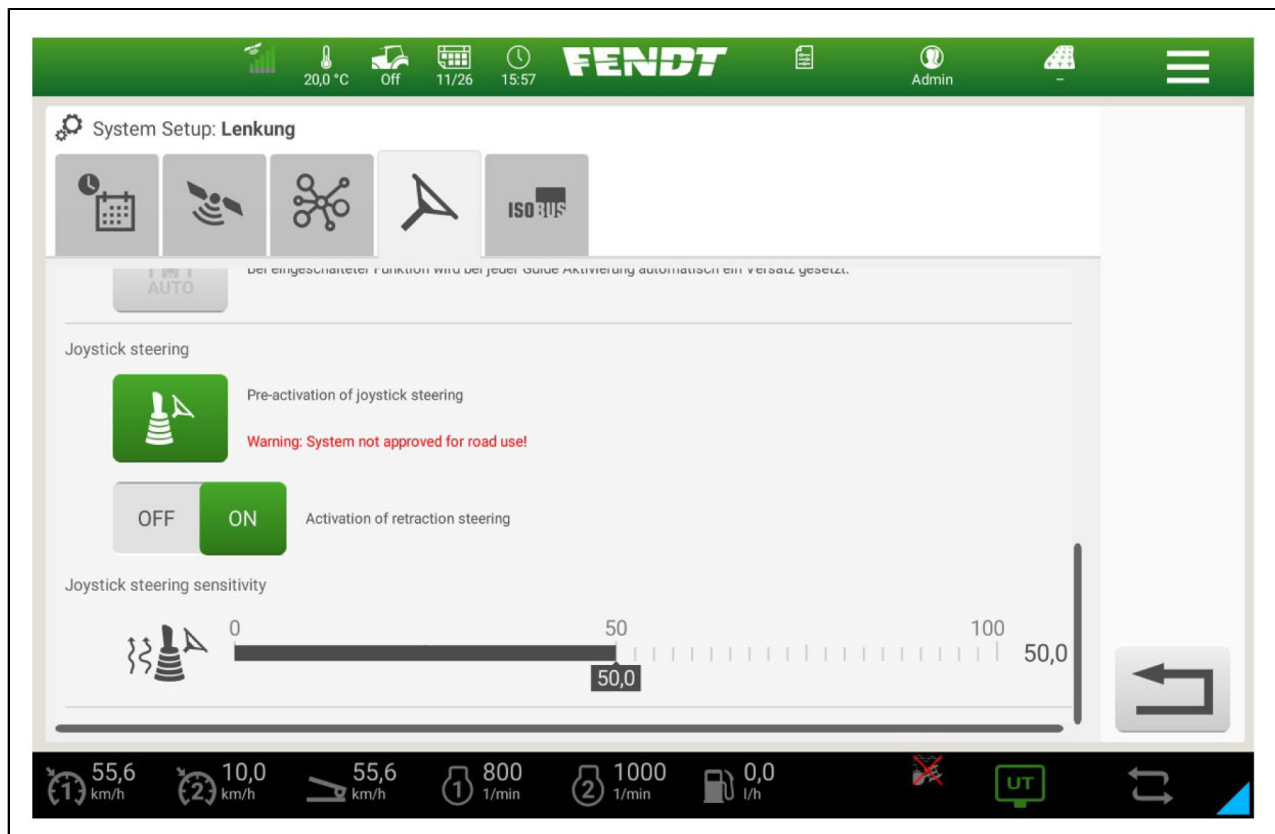

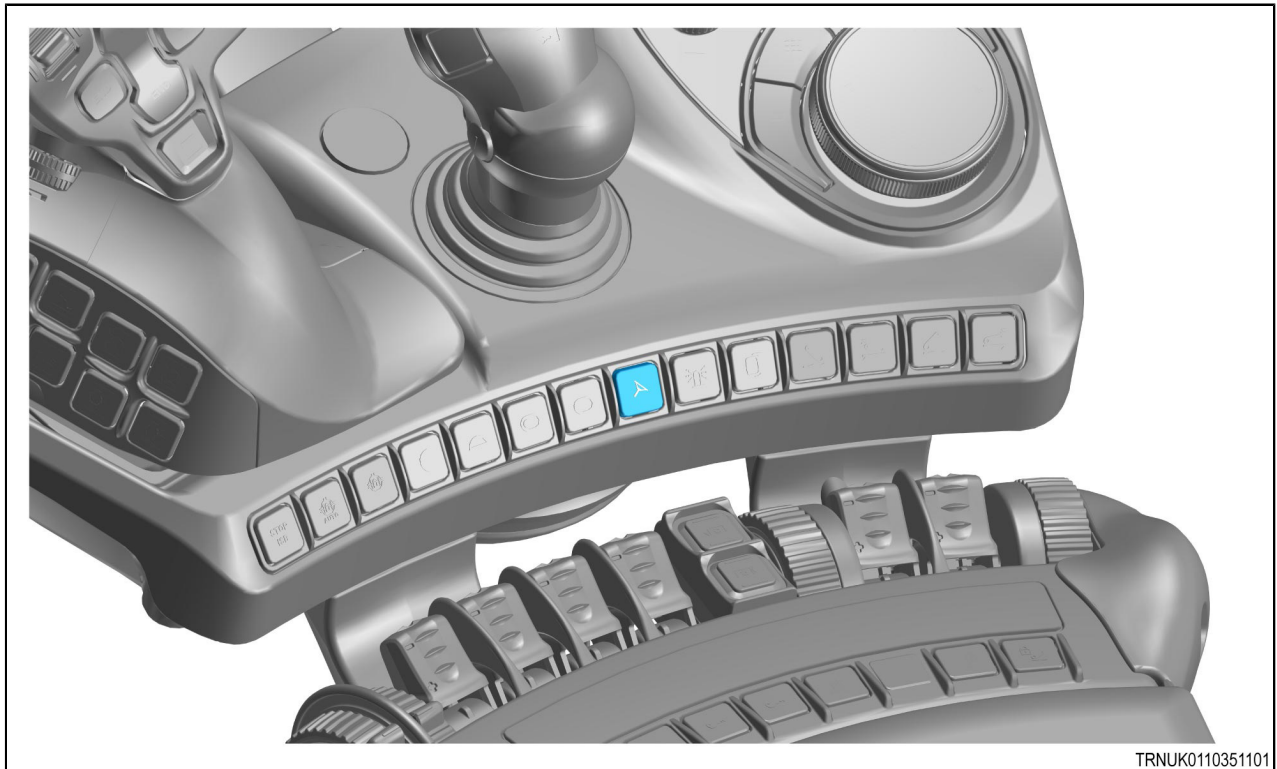


Fig. 3

After the activation in the terminal menu, actuate the guide pre-activation  or a freely configurable button on the key module of the right Armrest.

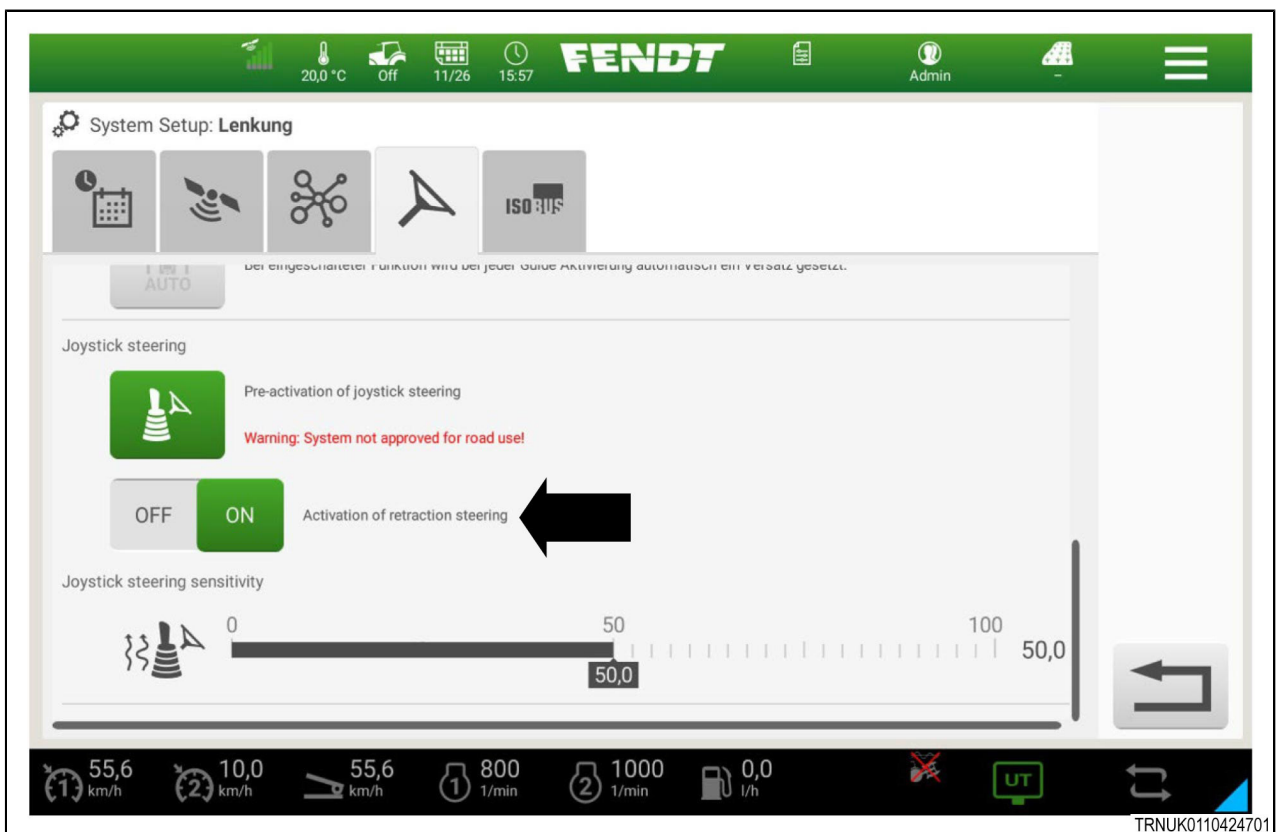
Please also note that the joystick steering only becomes active when the parking brake is released.



**Fig. 4**

The joystick has 2 operating modes, these can be switched using the retraction steering switch. If retraction steering is activated, the software attempts to drive straight ahead again at speeds greater than 0.5 km/h. The driver must therefore constantly press against the joystick in order to maintain cornering.

If retraction steering is deactivated, this return behavior does not exist.



**Fig. 5**

The sensitivity of the joystick can also be adjusted via an adjustment bar.

- 0 – low sensitivity (high steering resistance).
- 100 – maximum sensitivity (low steering resistance).

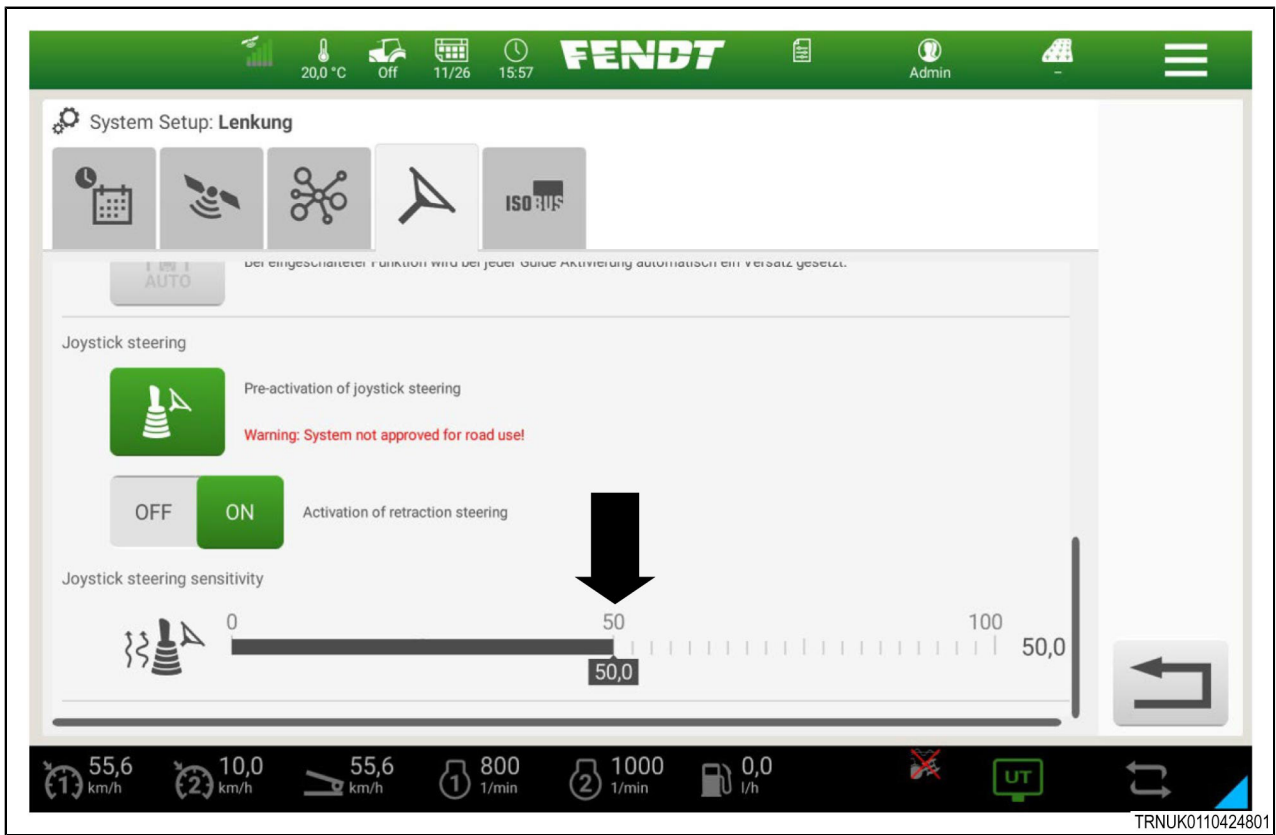


Fig. 6

### 3.3 Steering joystick functions

The button on the top of the joystick is for the activation of AutoGuide system (GPS/RTK).

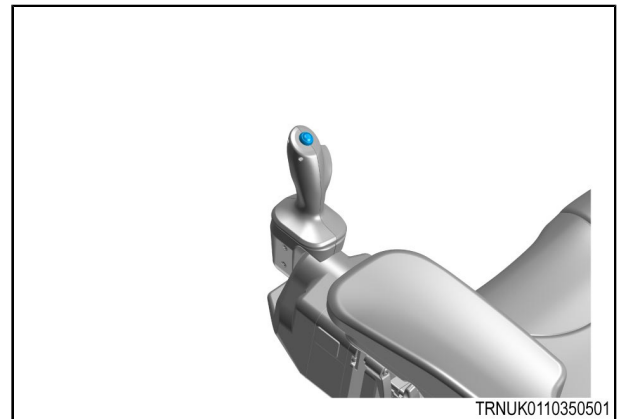


Fig. 7

Move the joystick to the left (away from the operator), the vehicle will steer left.

**NOTE:** An intervention in the steering joystick terminates lane guidance.

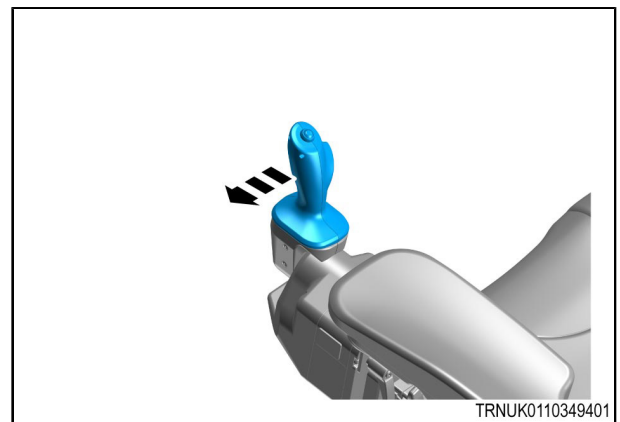


Fig. 8

Move the joystick to the right (towards the operator), the vehicle will steer right.

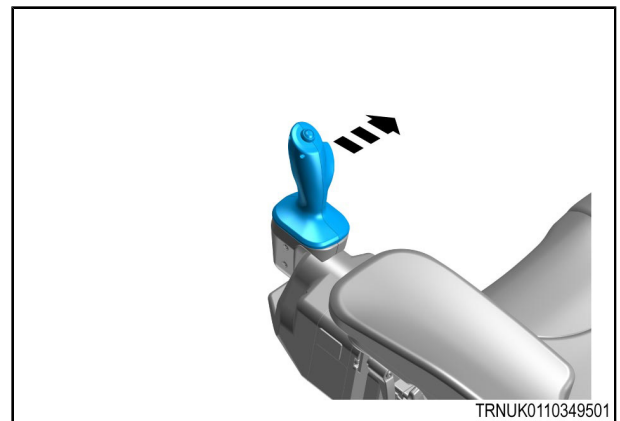
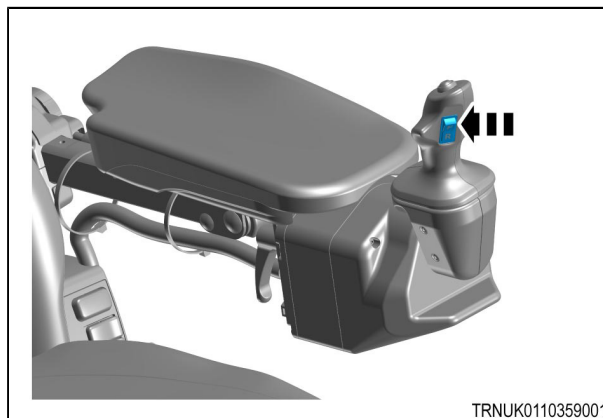


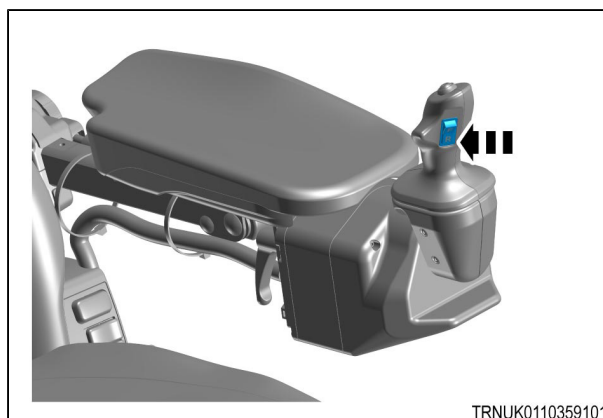
Fig. 9

**F: Forwards**

Press and release button in the desired direction. The tractor slows down to a standstill and accelerates in the opposite direction.

**Fig. 10****R: Reverse**

Press and release button in the desired direction. The tractor slows down to a standstill and accelerates in the opposite direction.

**Fig. 11**

## **4 Failure codes**

## Failure codes

FMI-SPN	Components	Cause	Consequence and remedy
SC-516257-9	Steering Joystick	Missing CAN messages from the joystick unit .	Check that the steering joystick cables are undamaged and properly connected.
SC-516257-31	Steering Joystick	Joystick steering paused because of a steering wheel intervention.	Reactivate the steering joystick.
SC-516264-31	Steering Joystick	Joystick steering paused because armrest is in park position (armrest up).	Fold down the joystick steering armrest.
SC-516265-12	Steering Joystick	Steering joystick version unknown.	Check the software version of your machine. This must be at least NOV 2023 or older.
SC-516272-31	Steering Joystick	Joystick unit rocker switch (F/R) reports a defect.	Have the component checked by your dealer and replaced if necessary.
SC-516273-31	Steering Joystick	Joystick unit lead angle reports a defect.	Have the component checked by your dealer and replaced if necessary.
SC-516274-2	Steering Joystick	Armrest of the joystick unit in undefined position or switch in armrest defective.	Fold down the armrest. If the error persists, contact your dealer who can check or replace the position sensor.
SC-516276-31	Steering Joystick	Joystick unit upper button (VG) reports a defect.	Have the component checked by your dealer and replaced if necessary.
SC-516277-31	Steering Joystick	Joystick unit feedback motor reports a defect.	Have the component checked by your dealer and replaced if necessary.

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