



Operator Manual

Technology

Model AUTO-GUIDE 3000 Basic



DRAFT

AUTO-GUIDE 3000 Basic for C1000 and C2100 terminals

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1. Safety

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1.1 Introduction

1.1.1 Safety alert symbol

The safety alert symbol means Attention! Become Alert! Your Safety Is Involved!

Look for the safety alert symbol both in this manual and on safety signs on this machine. The safety alert symbol will direct your attention to information that involves your safety and the safety of others.



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Fig. 1

1.1.2 Safety messages

The words DANGER, WARNING or CAUTION are used with the safety alert symbol. Learn to recognize these safety alerts and follow the recommended precautions and safety practices.



DANGER:
Indicates an imminently hazardous situation that, if not avoided, will result in **DEATH OR VERY SERIOUS INJURY.**



WARNING:
Indicates a potentially hazardous situation that, if not avoided, could result in **DEATH OR SERIOUS INJURY.**



CAUTION:
Indicates a potentially hazardous situation that, if not avoided, may result in **MINOR INJURY.**



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Fig. 2

1.1.3 Informational messages

The words important and note are not related to personal safety, but are used to give additional information and tips for operating or servicing this equipment.

IMPORTANT: *Identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of the machine, process, or its surroundings*

NOTE: *Identifies points of particular interest for more efficient and convenient repair or operation.*

1.1.4 Safety signs

**WARNING:**

Do not remove or obscure Danger, Warning or Caution signs. Replace any Danger, Warning or Caution signs that are not readable or are missing. Replacement signs are available from your dealer in the event of loss or damage. The actual location of the safety signs is illustrated at the end of this section.

Keep signs clean by wiping off regularly. Use a cleaning solution if necessary.

If parts have been replaced or a used machine has been purchased, make sure all safety signs are in the correct location and can be read. Illustrations of safety sign locations are located at the rear of this section.

Replace any safety signs that can not be read or are missing. Clean the machine surface thoroughly with a cleaning solution before replacing signs. Replacement safety signs are available from your dealer.

1.1.5 A word to the operator

It is your responsibility to read and understand the safety section in this manual and the manual for all attachments before operating this machine. Remember you are the key to safety. Good safety practices not only protect you, but also the people around you.

Study the features in this manual and make them a working part of your safety program. Keep in mind that this safety section is written only for this type of machine. Practice all other usual and customary safe working precautions, and above all remember - safety is your responsibility. You can prevent serious injury or death.

This safety section is intended to point out some of the basic safety situations that may be encountered during the normal operation and maintenance of your machine. This section also suggests possible ways of dealing with these situations. This section is not a replacement for other safety practices featured in other sections of this manual.

Personal injury or death may result if these precautions are not followed.

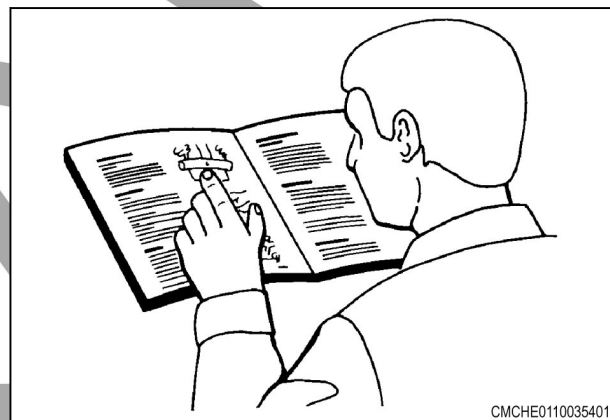
Learn how to operate the machine and how to use the controls properly.

Do not let anyone operate the machine without instruction and training.

For your personal safety and the personal safety of others, follow all safety precautions and instructions found in the manuals and on safety signs affixed to the machine and all attachments.

Use only approved attachments and equipment.

Make sure your machine has the correct equipment needed by the local regulations.



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Fig. 3



WARNING:

An operator should not use alcohol or drugs which can affect their alertness or coordination. An operator on prescription or 'over the counter' drugs needs medical advice on whether or not they can properly operate machines.



CAUTION:

If any attachments used on this equipment have a separate Operator Manual, see that manual for other important safety information.

1.1.6 This manual

This manual covers general safety practices for this machine. The operator manual must always be kept with the machine.

Right-hand and left-hand, as used in this manual, are determined by facing the direction the machine will travel when in use.

The photos, illustrations, and data used in this manual were current at the time of printing, but due to possible in-line production changes, your machine can vary slightly in detail. The manufacturer reserves the right to redesign and change the machine as necessary without notification.



WARNING:

In some of the illustrations and photos used in this manual, shields or guards may have been removed for clarity. Never operate the machine with any shields or guards removed. If the removal of shields or guards is necessary to make a repair, they must be replaced before operation.

1.2 Operation

1.2.1 Prepare for operation

Read and understand all operating instructions and precautions in this manual before operating or servicing the machine.

Make sure you know and understand the positions and operations of all controls. Make certain all controls are in neutral and the parking brake is applied before starting the machine.

Make certain all people are well away from your area of work before starting and operating the machine. Check and learn all controls in an area clear of people and obstacles before starting your work. Be aware of the machine size and have enough space available to allow for operation. Never operate the machine at high speeds in crowded places.

Emphasize the importance of using correct procedures when working around and operating the machine. Do not let children or unqualified persons operate the machine. Keep others, especially children, away from your area of work. Do not permit others to ride on the machine.

Make sure the machine is in the proper operating condition as stated in the Operator Manual. Make sure the machine has the correct equipment required by local regulations.

1.2.2 Safety information

Most personal injuries occurring during product operation, maintenance or repair are caused by failure to observe basic safety rules and precautions. Usually, an injury can be avoided by recognizing dangerous situations before an injury occurs.

The operator must be alert to the possible dangers. The operator must have the necessary training, skills and tools to perform these functions properly.

Improper operation, maintenance or repair of this product can be dangerous and could result in injury or death.

Do not operate, perform maintenance, or repair on this product, until you have read and understand the operation, the maintenance and the repair information.

Safety precautions and warnings are provided in this manual and on the product. Bodily injury or death could occur to the operator and bystanders if danger warnings are not heeded.

Not every possible circumstance that might involve a potential hazard can be anticipated. The warnings in this publication and on the product are, therefore, not all inclusive. If a tool, procedure, or technique, not recommended by AGCO, is used, you must make sure that it is safe for you and for others.

An operator must make sure the product will not be damaged or be made unsafe by the operation, maintenance, or repair procedures selected. Information, specifications, and illustrations in this publication come from information available at the time of publication production.

Specifications, torques, pressures, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service that is given to the product. Obtain the complete and most current information before starting a job. AGCO dealers have the most current information available.

This system can be momentarily disabled if the (GNSS) satellites or differential correction signal is lost.

If this product has been dropped, altered, transported or shipped without proper packaging, or otherwise treated without care, erroneous measurements can occur.

Periodically test this product to make sure measurements are accurate.

Contact AGCO immediately if this product does not operate correctly.

**CAUTION:**

Do not move a reference station while in operation. Moving an operating reference station can interfere with the controlled steering of a system using the reference station. This could result in personal injuries or damage to property.

Do not erect the reference station under or within the vicinity of high voltage power lines.

When using the portable reference station, make sure the tripod is securely mounted.

1.2.3 Electrical components

**WARNING:**

Incorrectly connected power can cause severe damage to people or the equipment.

Make sure all the power cables to the system components are correctly connected. See the machine operator manual for safety information.

1.2.4 Disengaging assisted steering

The operator must disengage the assisted steering and take control of the machine if:

- An obstacle is in the line of travel
 - The machine steers away from the desired path
1. Use any of the following manual interventions to disengage the assisted steering:
 - Decelerate to under 0.3 km/h (0.19 mph)
 - Turn the steering wheel a few degrees in either direction
 - Select the auto steering icon on the machine display
 2. Move the steering switch to the off position, if the above actions do not disengage the assisted steering.

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DRAFT

2.1 Introduction

**CAUTION:**

In some of the illustrations used in this Operator Manual, panels or guards may have been removed for clarity. Never operate the tractor with these panels and guards removed. If the removal of a shield is necessary to make a repair, it must be replaced before operation.

**CAUTION:**

Read this book in its entirety prior to operating machine. Use only genuine replacement parts for repairs and/or replacement.

This manual gives the operator the proper instructions needed for operation and maintenance. Read, understand, and follow these instructions for best machine performance and life. With proper maintenance and operation procedures, the machine will have better overall performance. Use normally available tools for maintenance on this machine.

All operators must read and understand this manual before operating this machine. Where possible, operators who have not operated the machine must receive instruction from an operator who has operated this machine. Your dealer can give instruction in machine operation. Keep this manual with the machine for future reference. If the original manual is damaged, order a replacement from your dealer.

See your dealer in for any service problems and adjustments. The dealer is equipped for all service work and to help with specific applications of the tractor in local conditions.

Left-hand and right-hand are determined by facing the direction the machine will travel when in use.

2.1.1 Intended use

This machine is designed solely for use in customary agricultural operations.

Do not use this machine for any application or purpose other than those described in this manual. The manufacturer accepts no liability for damage or injury resulting from misuse of this machine.

Compliance with the conditions of operation, service and repair as specified by the manufacturer constitute essential elements for the intended use of this machine.

This machine should be operated, serviced and repaired only by qualified persons familiar with its characteristics and familiar with the relevant safety rules and procedures.

All generally recognized safety regulations and road traffic regulations must be obeyed at all times.

Any unauthorized modifications performed on this machine will relieve the manufacturer of all liability for any resulting damage or injury.

2.1.2 Proper disposal of waste

Improper disposal of waste can pollute the environment and ecology. A few examples of potentially harmful waste from AGCO equipment include, but not limited to, items such as oil, fuel, coolant, brake fluid, filters, battery chemicals, tires, etc.

Use leak proof containers when draining fluids. Do not use food or beverage containers to collect waste fluids, as food or beverage container(s) may mislead someone into drinking from them.

Do not pour or spill waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire with local environmental or recycling center on the proper way to recycle or dispose waste.

2.2 Regulatory information

The following provides information on product compliance with government regulations for use.

2.2.1 Canadian emission labeling requirements

1. Operation is subject to the following two conditions:
 - This device may not cause interference
 - This device must accept any interference, including interference that may cause undesired operation of the device.
2. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.
3. This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte conform a la norme NMB-003 du Canada.

2.2.2 Community of Europe compliance

The product described in this manual is in compliance with the radio and telecommunications terminal equipment (R&TTE) and electromagnetic compatibility (EMC) directives from the European Community.

2.2.3 FCC compliance

This device complies with Part 15 of the Federal Communications Commission (FCC) rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference receiver, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Move the equipment away from the receiver.
- Plug the equipment into an outlet on a circuit different from that to which the receiver is powered.
- Consult the dealer or an experienced radio/television technician for additional suggestions.

IMPORTANT: *Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.*

2.2.4 Radio frequency exposure requirements

To comply with the radio frequency exposure requirements, maintain at least 25 cc (10 in) between the user and the radio modem.

Handling the cord of this product, or cords associated with accessories sold with this product, will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm.

Wash hands after handling.

2.2.5 UHF radio usage

IMPORTANT: Using an Ultra High Frequency (UHF) radio requires a license. Operating a UHF radio without a license can result in fines and other penalties. Make sure you comply with all local laws before operating a UHF radio. Contact your local authorities (such as, the Federal Communications Commission (FCC) in the United States) for details.

Real Time Kinematic (RTK) mode has made Ultra High Frequency (UHF) the most common choice of communication between a base station and a receiver. Know the strengths and weaknesses of this technology to get the best use out of the receiver. The quality and strength of the UHF signals translates into range for UHF communications.

1. The system's range will greatly depend on the local conditions. Topography, local communications and even meteorological conditions play a major role in the possible range of RTK communications. If needed, use a scanner to find clear channels.
2. The system's range will increase by adjusting the base station's antenna using the following methods:
 - Make sure the base station radio modem has a fully charged battery.
 - Use directional antennas and/or repeaters to increase the system's range. Directional antennas concentrate the signal power within a more narrow direction, significantly increasing the range of the system.

2.2.6 WEEE directive

Following information is for EU-member states only:

The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

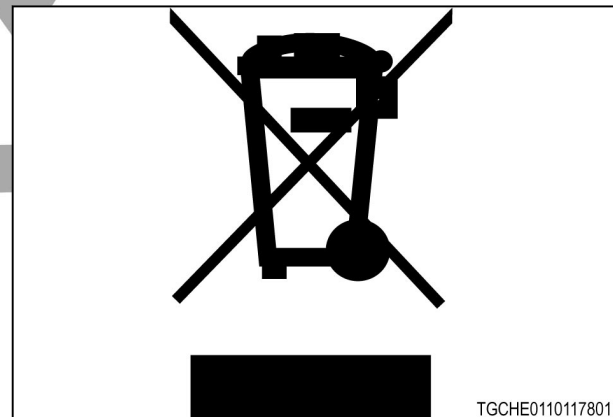


Fig. 1

2.3 AUTO-GUIDE 3000




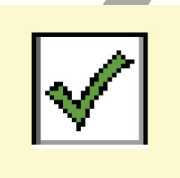
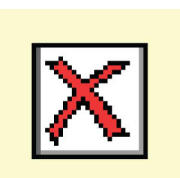
The AUTO-GUIDE 3000 system is a satellite based guidance system which provides a hands-free automatic steering function. The AUTO-GUIDE 3000 system include a display and a TopDock. The machine must be equipped with AUTO-GUIDE ready harnessing, which includes a steering valve and a wheel angle sensor.

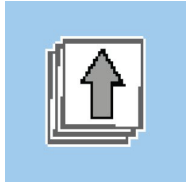
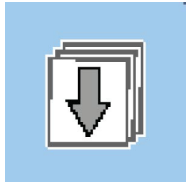
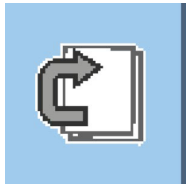
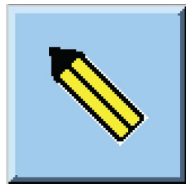
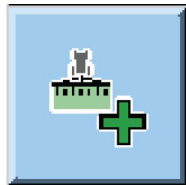

The TopDock is a receiver that receives signal from global positioning satellites.

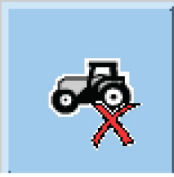

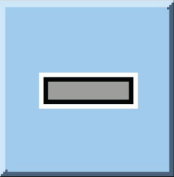
The display uses the satellite data received by the TopDock to identify the coordinates of the machine. The AUTO-GUIDE 3000 system uses this information to accurately find the machine's position, and control the machine's steering system.

The display lets the operator to determine lines in the field, called waylines, along which the machine can automatically steer.




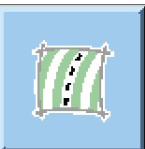
2.3.1 General icon definitions



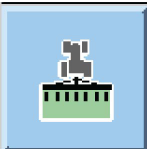





Icon	Name	Definition
	Accept	The checkmark icon will accept and save any changes made, close the screen and return to be previous screen.
	Cancel	The red X icon will cancel any changes, close the screen and return to be previous screen.
	Return	The return icon will close the screen and return to be previous screen.
	Setting is enabled	A small box with a green checkmark next to a feature indicated the feature in enabled.
	Setting is disabled	A small box with a red X next to a feature indicated the feature is disabled.







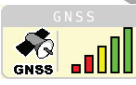

Icon	Name	Definition
	Page up	The page up icon will move the display to the previous screen, menu or text.
	Page down	The page down icon will move the display to the next screen, menu, or text.
	Page cycle to front	The page cycle icon will move the display from the last page to the first page in a multiple page menu.
	Edit	The yellow pencil indicates there is information that can be changed.
	New	A green + in the lower right-hand corner of an icon indicates new information can be created.
	Select	The folder icon indicates information can be recalled from previous use.




Icon	Name	Definition
	Delete	A red X in the lower right-hand corner of an icon indicates the information can be deleted.
	Increase	Select to raise a level, a response, or a setting.
	Decrease	Select to lower a level, a response, or a setting.

2.3.2 Main guidance screen icon definitions

Icon	Name	Definition
	Automatic steering	The automatic steering icon is selected to engage or disengage the automatic steering system.
	System setup	Selecting the system setup icon will show the system setup menu. The system setup menu will be different for the basic guidance mode and the advanced guidance mode.
	GO	Selecting the GO icon shows the combined implement and wayline setup information. The GO icon is only available in basic mode. The GO icon is disabled when automatic steering is engaged.
	Wayline	Shows the wayline menu to set up, recall, transfer or edit waylines.

Icon	Name	Definition
	Steering response	Shows the steering response menu to configure the steering response parameters.
	GNUS Skyplot	Shows the visible satellites and their location in relationship to the TopDock.
	Implement	Shows the implement menu to set up, recall, transfer or edit implements.
	Correction Setup	Shows the correction source menu to set up, recall, transfer, or edit correction sources.
	Wayline offset	Shows the wayline offset menu for manual wayline offset and nudge.
	System Status	Shows system information for components of the guidance system.
	Inertial	Shows information for roll, pitch, and heading for the guidance system.
	Correction source	<p>Icon will be different depending on the correction source selected. If the system is in Autonomous mode the icon space will be blank.</p> <p>The correction source icon changes the background color to show condition.</p> <ul style="list-style-type: none"> • Red indicated a weak signal or no signal • Yellow indicated a weak signal quality • White indicates an sufficient signal quality • Green indicates a good quality signal

Icon	Name	Definition
	GNUS	<p>The GNUS icon shows the number of satellites available and the condition of the signal quality.</p> <p>The GNUS icon changes the background color to show condition.</p> <ul style="list-style-type: none"> • Red indicated a weak signal or no signal • Yellow indicated a weak signal quality • White indicates a signal sufficient for fallback mode only • Green indicates a good quality signal
	Steering condition	<p>The color of the steering condition icons indicates the condition of the steering system.</p> <ul style="list-style-type: none"> • Red indicates the automatic steering cannot be engaged • Yellow indicates a standby mode. The standby mode is activated by selecting the automatic steering icon when not all the conditions to engage the system are met, such as the operating speed is not fast enough. <p>If the automatic steering is not engaged within 15 seconds, the icon will turn red.</p> <ul style="list-style-type: none"> • White indicates the automatic steering can be engaged. • Green indicated the automatic steering is engaged.
	Crosstrack	<p>Shows the position of the center of the machine in relationship to the wayline. When '0' is shown, the vehicle is centered on the wayline.</p> <p>In basic mode, the crosstrack information box is always visible on the main guidance screen.</p>
	Heading	<p>Shows the direction of travel.</p> <p>The heading information box is only visible in advanced mode.</p>
	Accuracy	<p>Shows the position accuracy required for the correction source.</p> <p>The accuracy information box is only visible in advanced mode.</p>
	Speed	<p>Shows the current speed of the machine.</p> <p>The speed information box is only visible in advanced mode.</p>
	GNSS	<p>Shows the GNSS signal strength.</p> <p>The GNSS information box is only visible in advanced mode.</p>
	Correction	<p>Shows the correction source signal strength.</p> <p>The correction information box is only visible in advanced mode.</p>

Icon	Name	Definition
	Drift	Shows the amount of GPS drift compensation. The drift information box is only visible in the advanced mode.
	Nudge	Shows the amount of manual nudge. The nudge information box is only visible in advanced mode.
	Path	Shows the current row of travel in relationship to the original wayline. The path information box is only visible in advanced mode.

2.3.3 Hardware components

TopDock

The TopDock is mounted on the machine and contains a satellite receiver, an antenna, integrated inertial sensors, and memory storage. Two optional snap-in units are available to increase quality of the correction source that is used by the guidance system:

- inertial Measurement Unit (IMU)
- Real Time Kinematic (RTK) unit

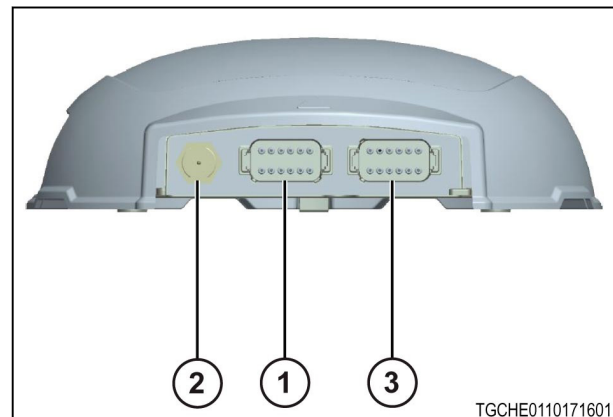


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Fig. 2

- (1) The main connector supplies power to the TopDock
- (2) The external antenna connector is used when the antenna needs to be located away from the TopDock
- (3) The auxiliary connector is not used

The rear of the TopDock



TGCHE0110171601

Fig. 3

- (1) Correction antenna connector
- (2) Power LED - illuminated if the TopDock is operating
- (3) Global Navigation Satellite System (GNSS) reception indicator Automatic steering is available - color changes depending on correction source Red - automatic steering is not available because a quality correction source is not available
- (4) Correction source Green - correction source received and subscription is current Red - correction source not received

The left-hand side of the TopDock.

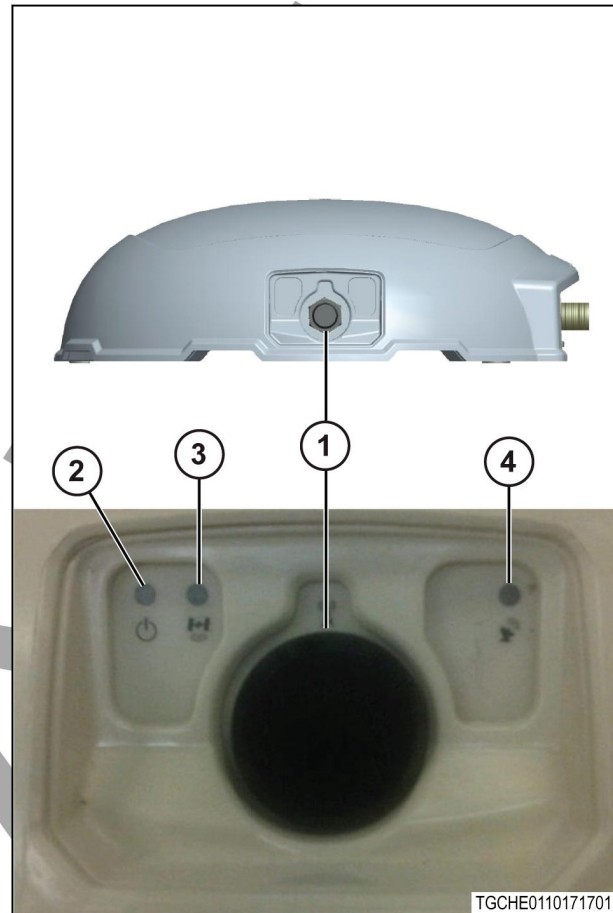


Fig. 4

Terminal

The C1000 is available for all machine types.

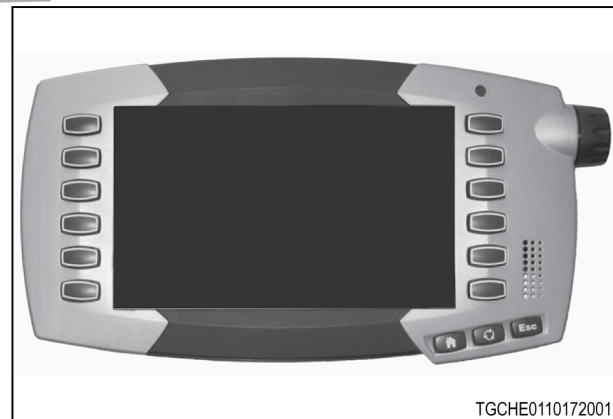


Fig. 5

The C2100 is only available for use in a combine.



Fig. 6

Optional snap-in units

Inertial measurement unit (IMU)

Required for the decimeter and the centimeter correction source levels.

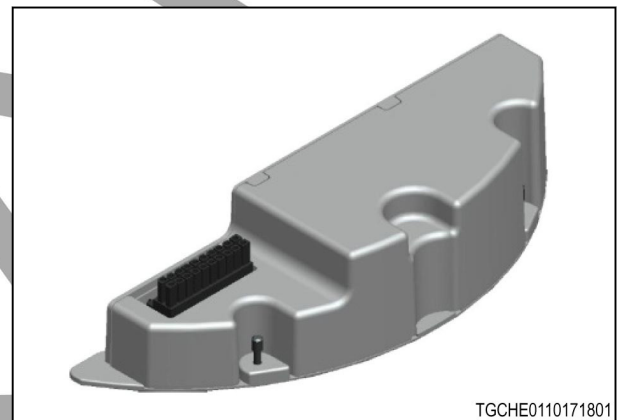


Fig. 7

Real Time Kinematic (RTK) unit

Required for the centimeter correction source level

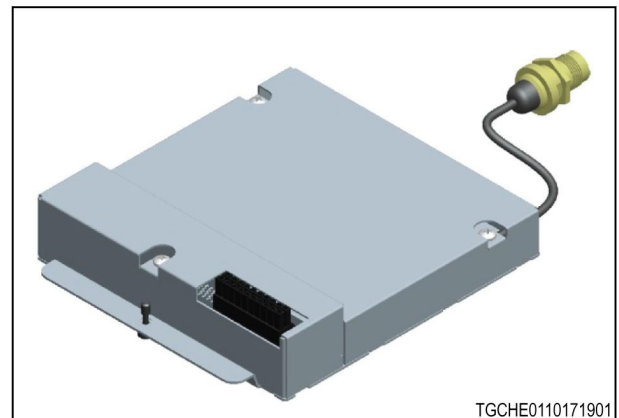


Fig. 8

DRAFT

3. Operation

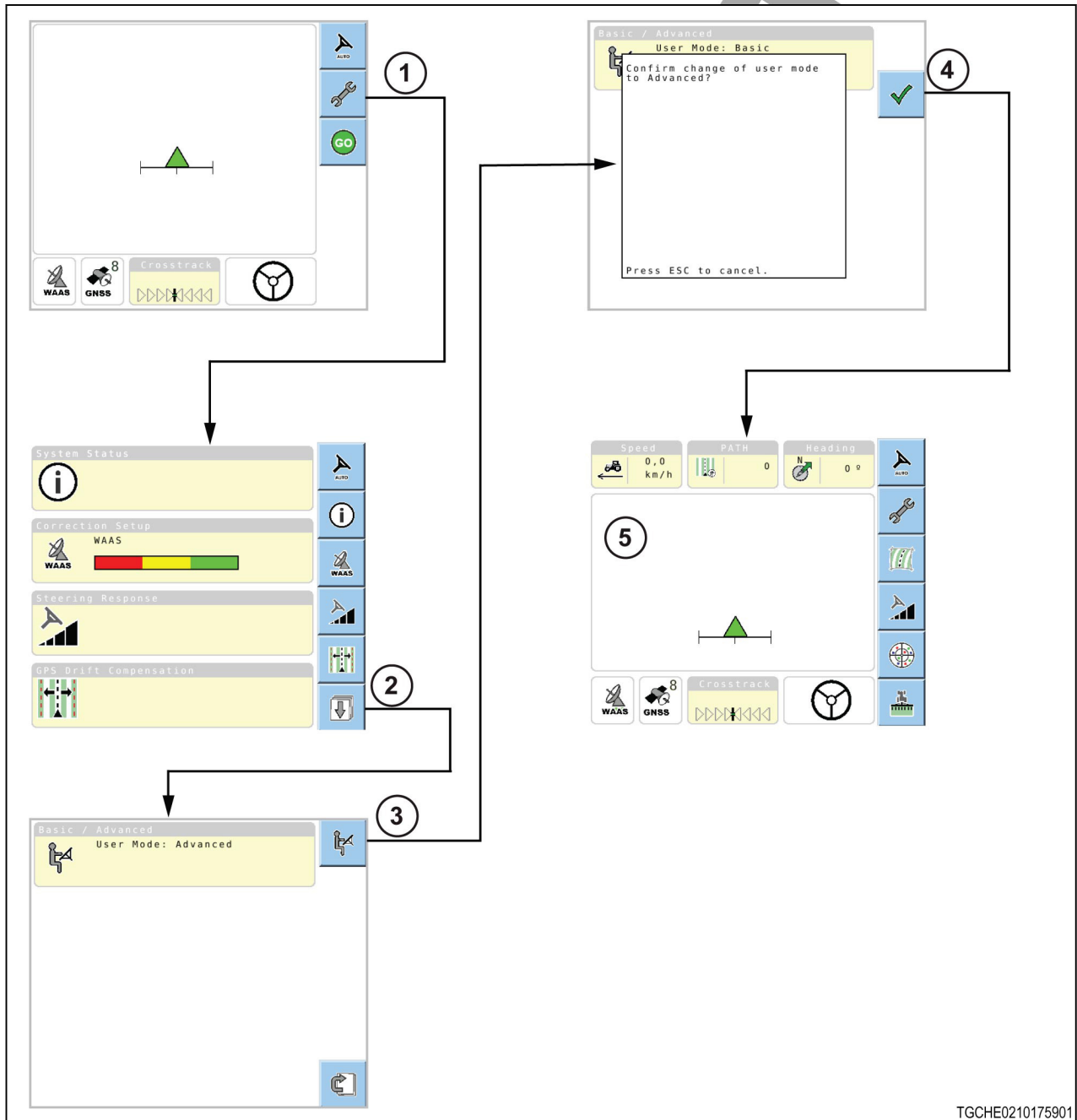
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3.1 Prepare for operation

3.1.1 Changing from basic mode to advanced mode



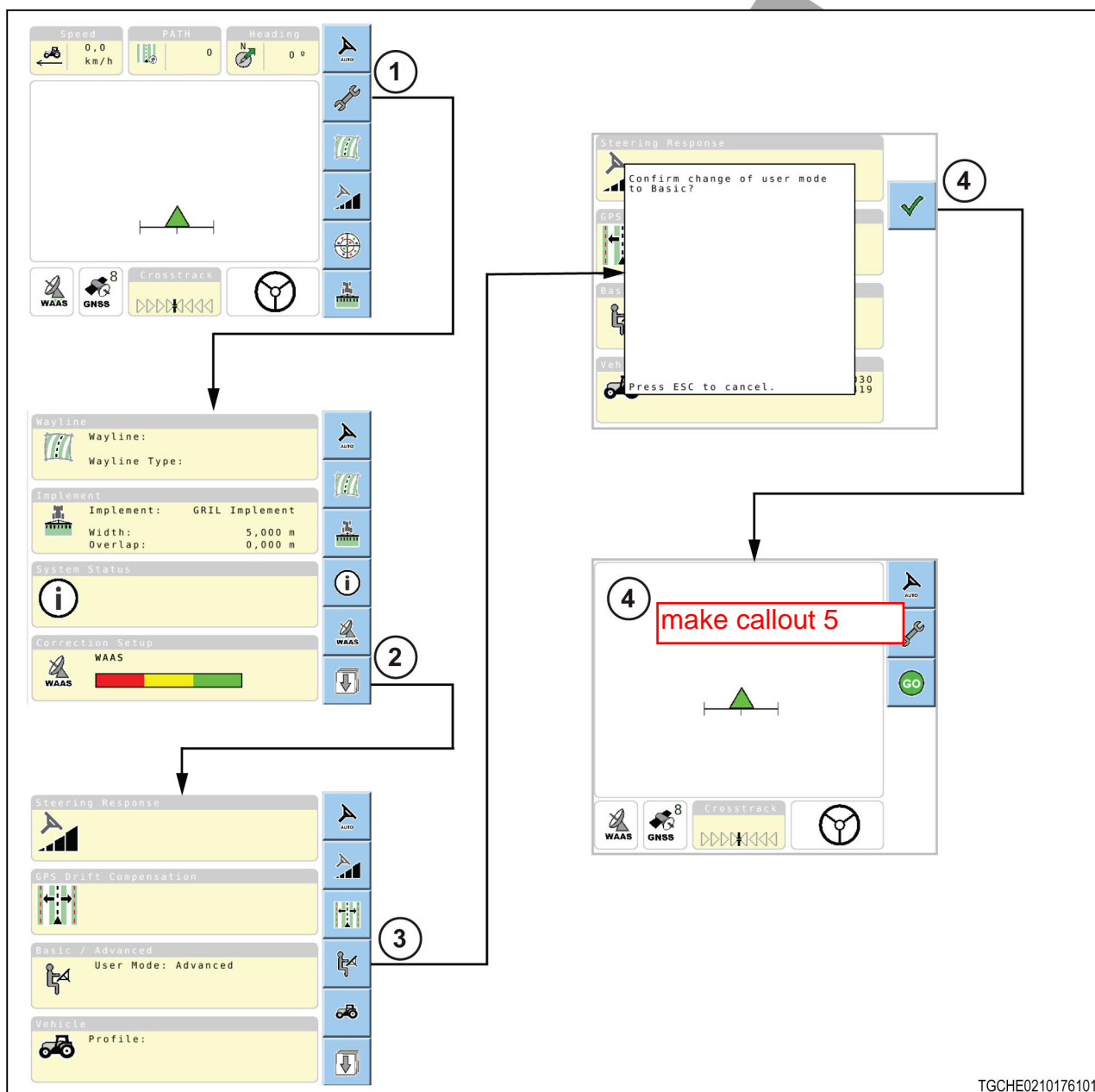
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Fig. 1

1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Select  (4) to change to the advanced mode.

The system will reset and the terminal will show the main guidance screen (5) in the advanced mode.

3.1.2 Changing from advanced mode to basic mode



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Fig. 2

1. Select (1).
2. Select (2).
3. Select (3).
4. Select (4) to change to the basic mode.
The system will reset and the terminal will show the main guidance screen (5) in the basic mode.






3.1.3 Advanced mode main guidance screen modification

The information boxes (1) shown along the top of the advanced mode main guidance screen can be modified to show different information.

The icons (2) on the right-hand side of the advanced mode guidance main screen can be modified. This modification will let other functions can be used directly from the main guidance screen. There are some instances where the icons cannot change.

The top two icons are not configurable. The  and  icons will always show.

There are other instances where the icons are not configurable.

- If a nudge increment is set to make up for global positioning satellite (GPS) drift, the last two icons will show  and .
- If the compass is disabled,  will show.
 - The icon will change if:
 - Automatic steering engaged 
 - Automatic steering cannot engage 

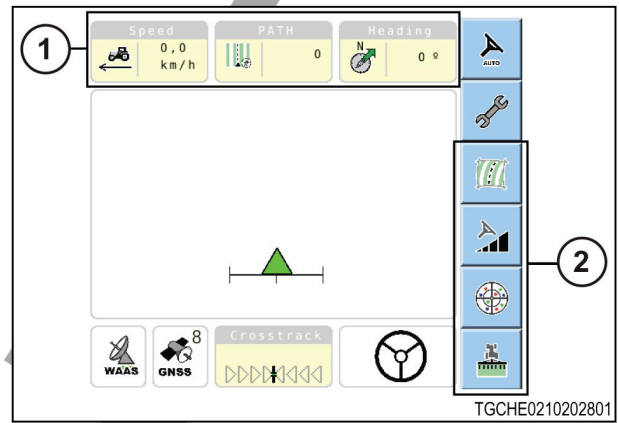
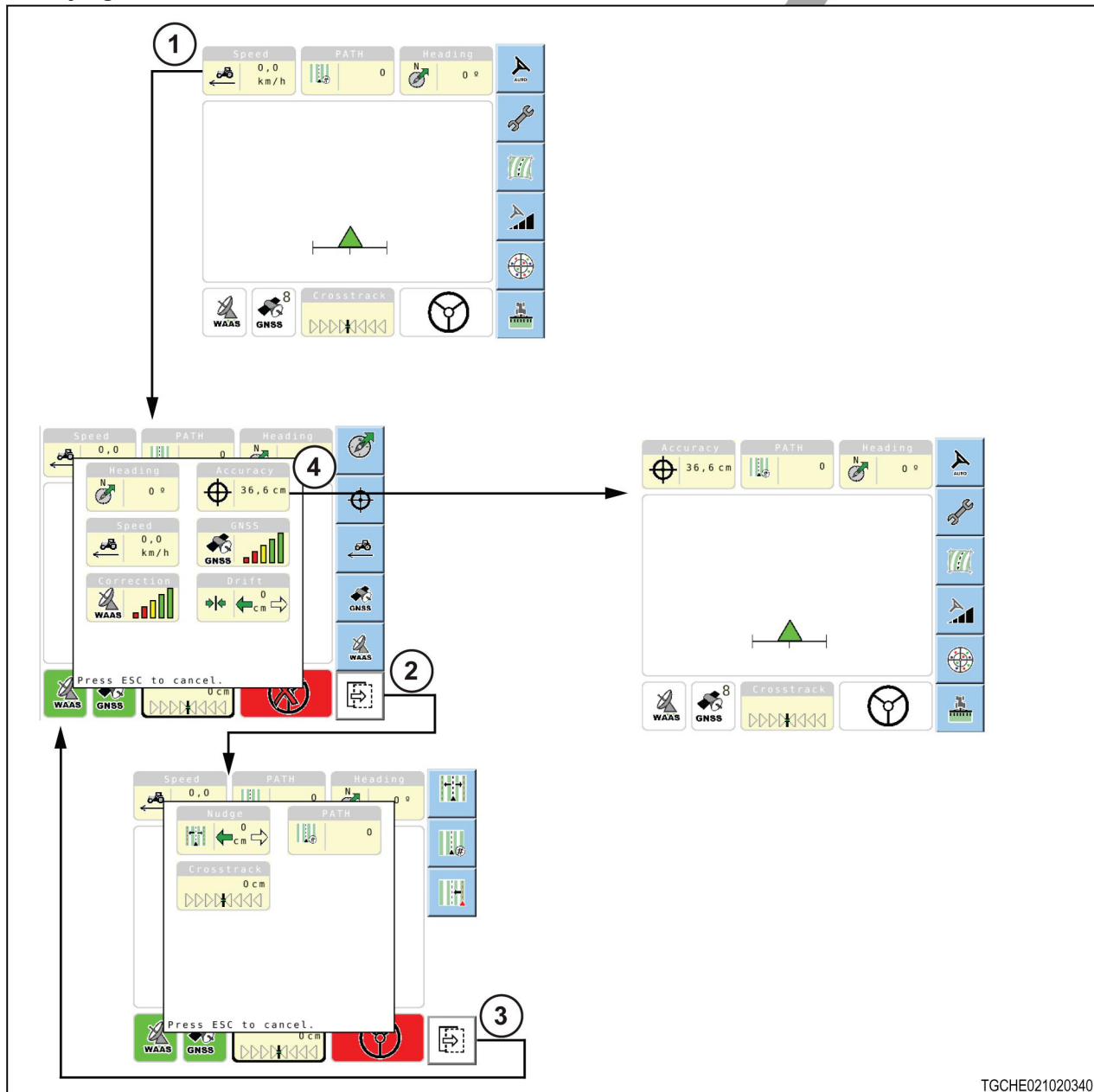




Fig. 3

Modifying the information boxes

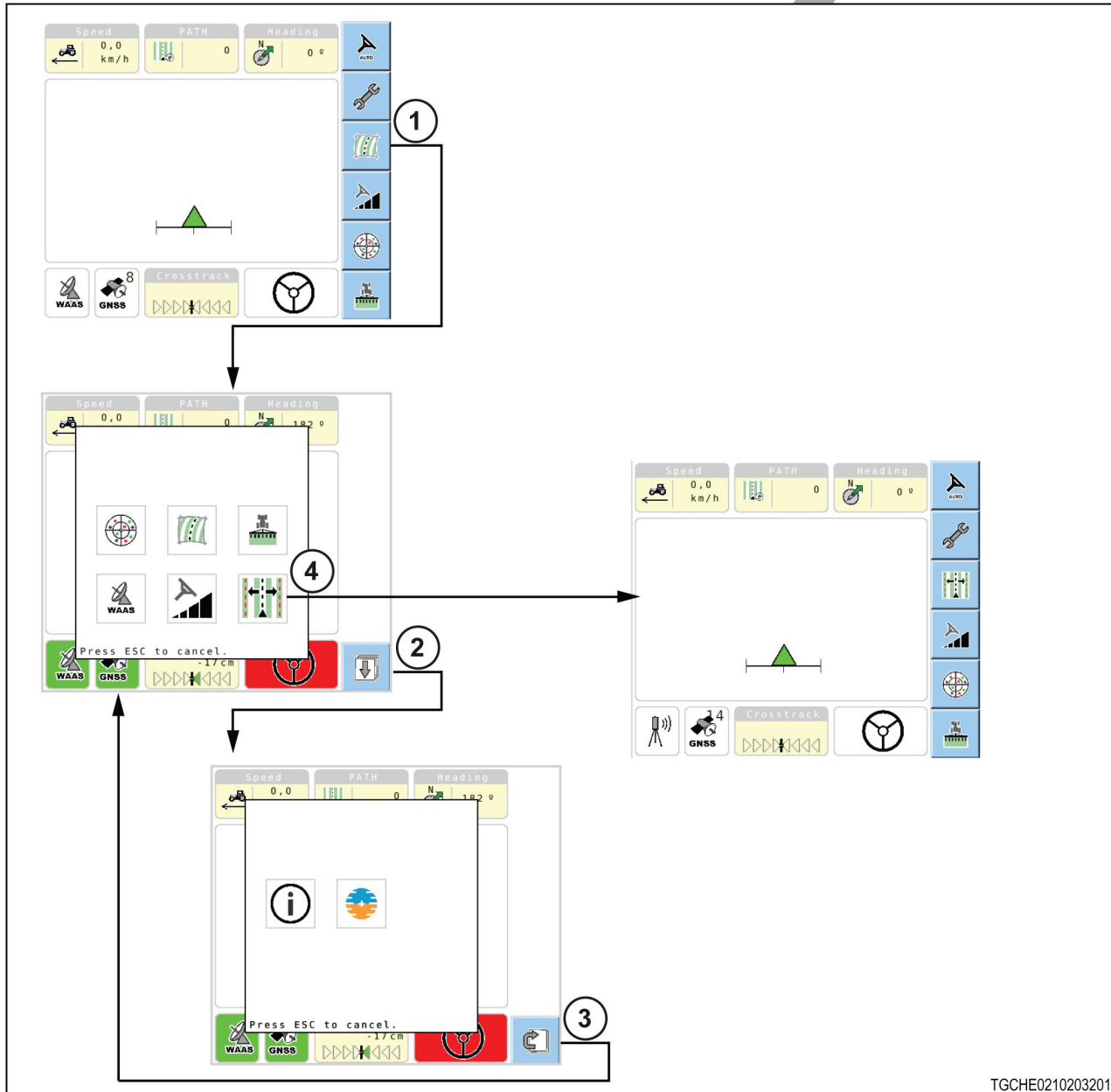


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Fig. 4



1. Select the information box (1) to be changed until the terminal shows the information box screen. To see all available information boxes.
 - Select  (2) to show the next icon screen.
 - Select  (3) to return to the first icon screen.
2. Select the desired icon (4). The terminal will show the advanced mode main guidance screen with the selected icon.

Modifying the icons



TGCH0210203201

Fig. 5

1. Select and hold the icon (1) to be changed until the terminal shows the icon screen. To see all available icons.
 - Select  (2) to show the next icon screen.
 - Select  (3) to return to the first icon screen.
2. Select the desired icon (4). The terminal will show the advanced mode main guidance screen with the selected icon.

3.2 Calibrations and Configurations

Before using the guidance and automatic steering system, the following procedures must be completed.

3.2.1 Enabling the compass

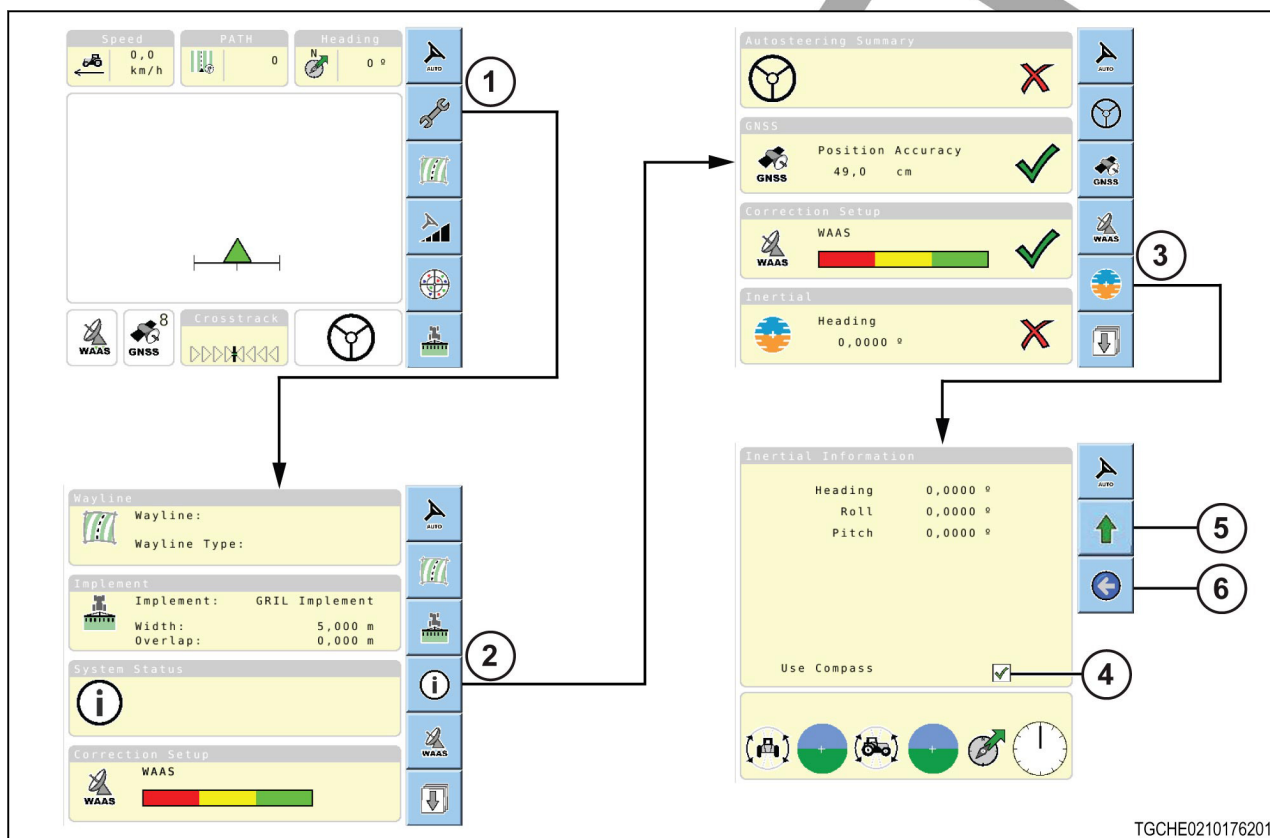







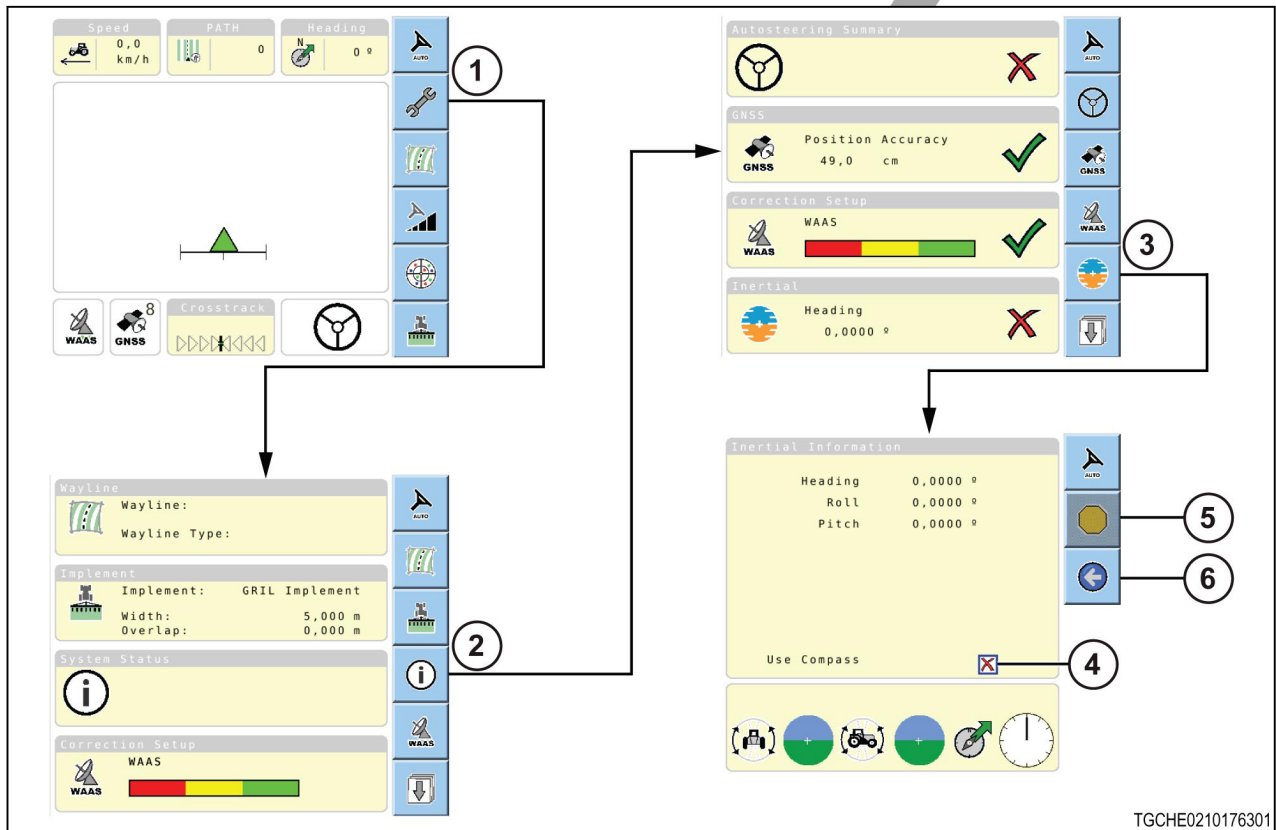


Fig. 6








1. Select  (1).
 2. Select  (2).
 3. Select  (3).
 4. Make sure the box next to Use Compass has a checkmark  (4).
 5. The system must sense the direction of the vehicle is moving. When the vehicle is moving the system can sense changes in direction automatically without the use of the compass. If necessary, select  (5) to reset the vehicle direction. The icon will be grayed out when automatic steering is engaged. The icon will change to  if automatic steering cannot be engaged.
 6. Select  (6) to return to the previous screen.
- See the information for calibrating the compass.

3.2.2 Disabling the compass



TGCH0210176301






Fig. 7

1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Make sure the box next to Use Compass has an X  (4).
5. The system must sense the direction of the vehicle is moving. When the vehicle is moving the system can sense changes in direction automatically without the use of the compass. If necessary, select  to reset the vehicle direction. The icon will be grayed out when automatic steering is engaged. The icon will change to  (5) if automatic steering cannot be engaged.
6. Select  (6) to return to the previous screen.

3.2.3 Calibrating the compass

Compass calibration is required:

- When using the system for the first time
- If the TopDock is moved to different position on the machine or moved to another machine
- If a receiver for the correction source has been moved

1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Select  (4).
5. Select  (5).
6. Follow the prompts on the terminal (6).
When the calibration is complete, the terminal will return to the calibration menu.

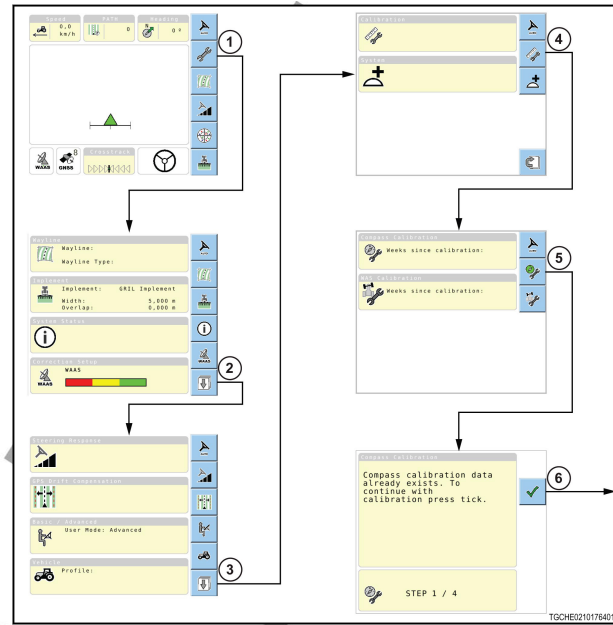


Fig. 8

3.2.4 Calibrating the wheel angle sensor

Wheel angle sensor (WAS) calibration is required:

- When using the system for the first time
- If the machine steering is no longer accurate

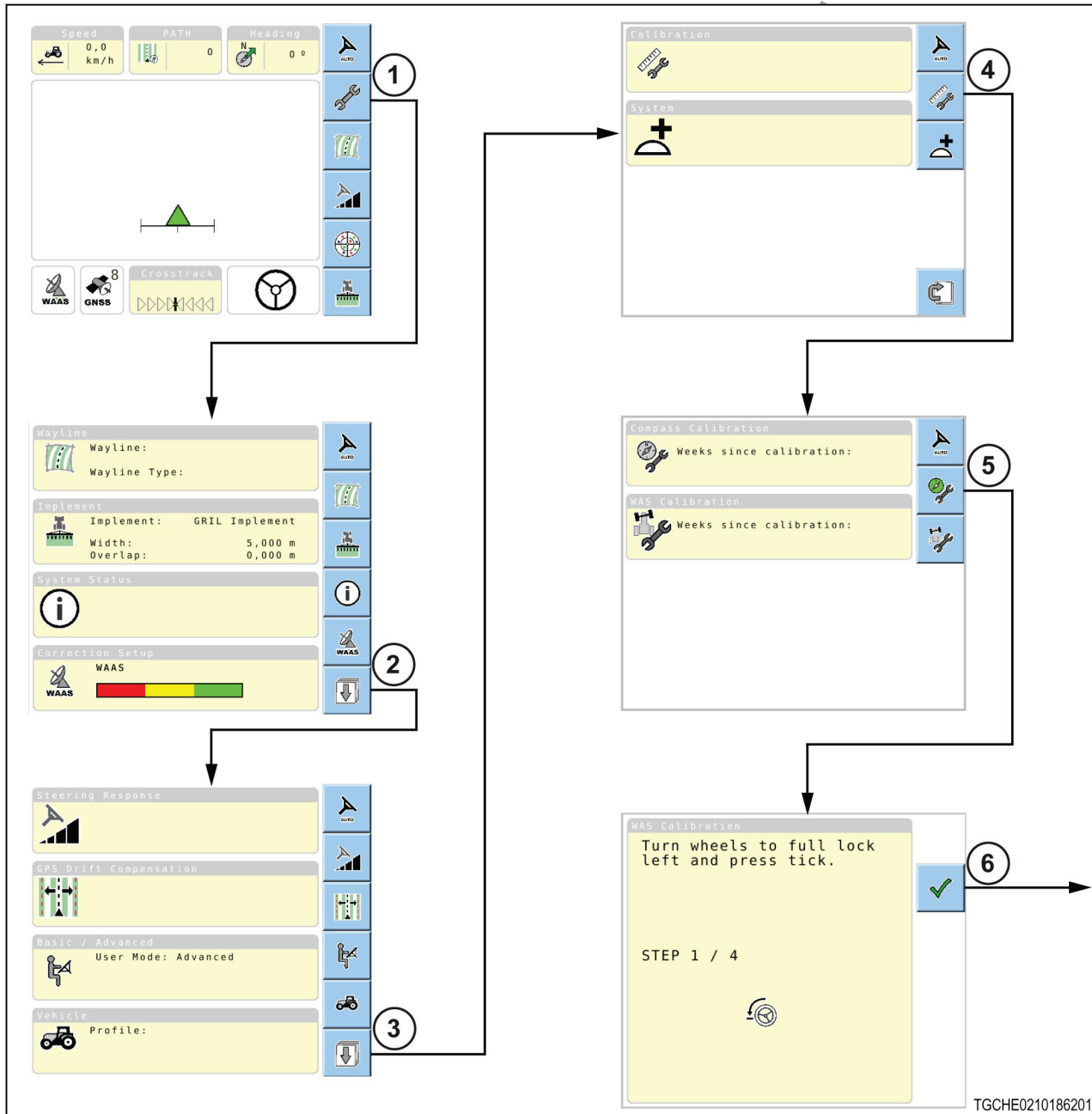




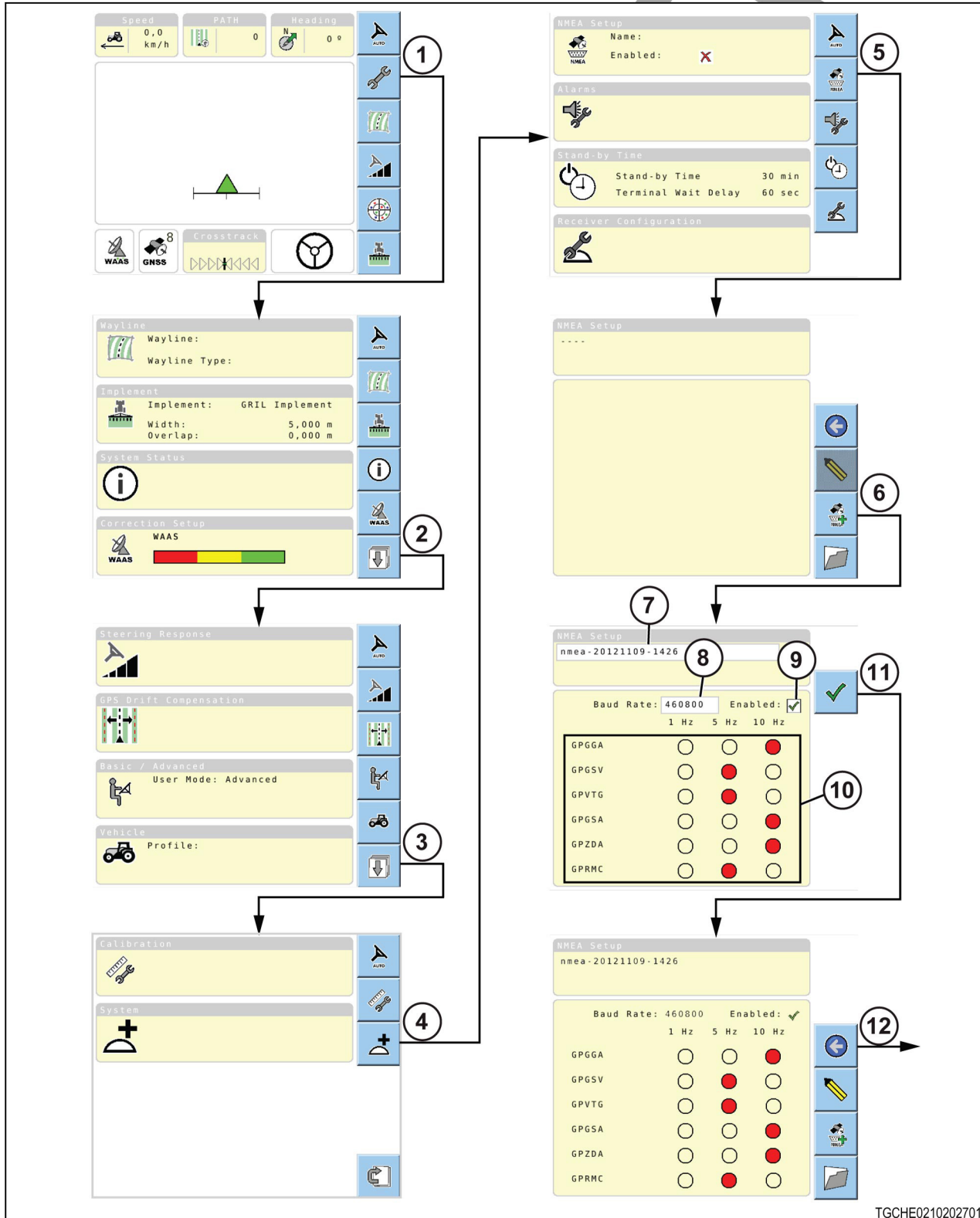


Fig. 9

1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Select  (4).
5. Select the WAS calibration icon (5).
6. Follow the prompts on the terminal (6).
When the calibration is complete, the terminal will return to the calibration menu.








3.2.5 Configuring NMEA output settings

The National Marine Electronics Association (NMEA) setup provides an output of the global navigation satellite system (GNSS) information. The GNSS information is shared through a serial port to other components on the vehicle. The location of the serial port is different for each machine.



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Fig. 10

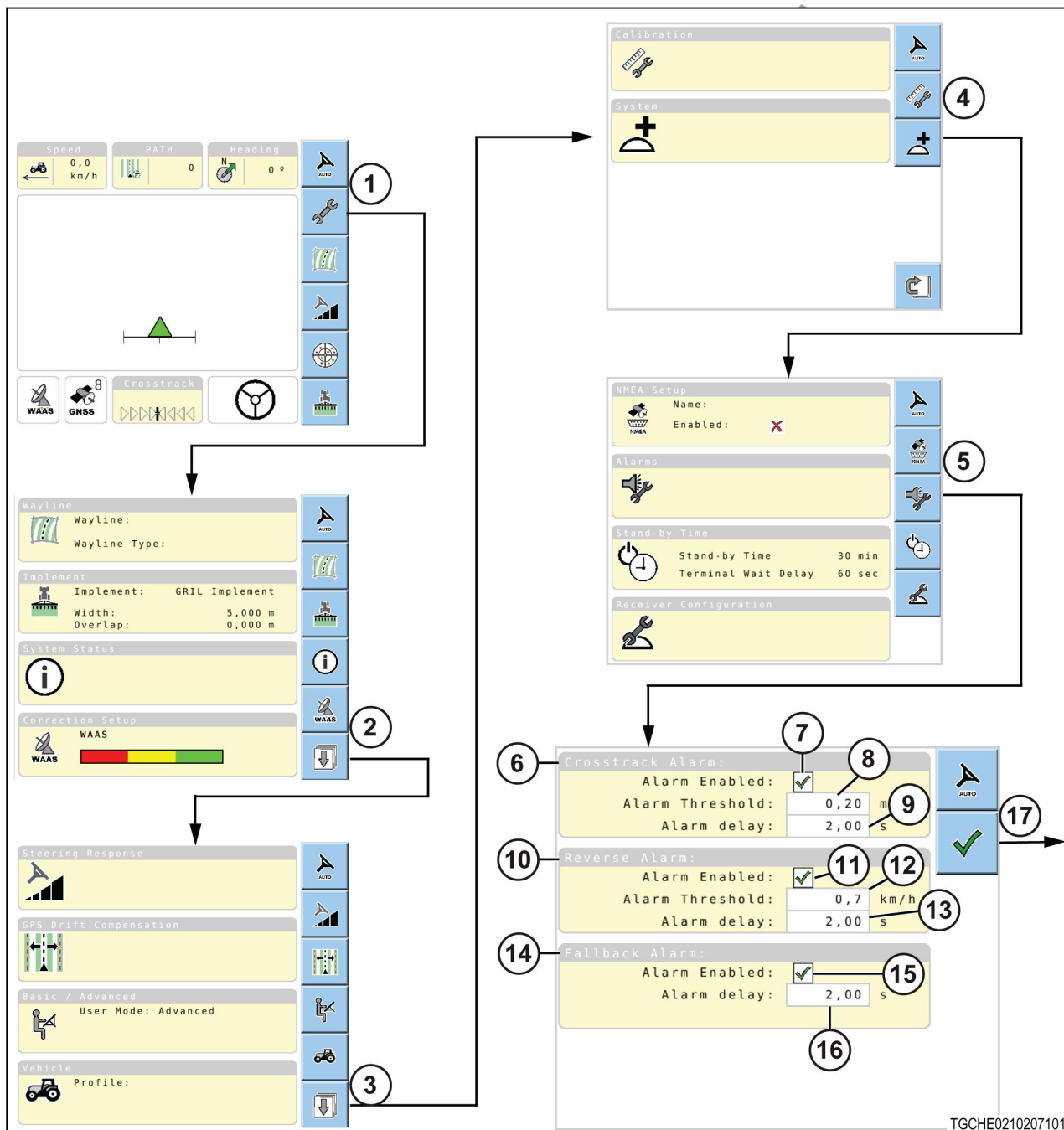
1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Select  (4).
5. Select  (5).
6. Select  (6).
7. Changing the profile name is optional. Select the name box (7) to change the name. The default name includes the letters "nmea" and the current date and time.
8. Make sure the baud rate is correct. Select the box (8) to change.
9. Make sure the function has a (9).
10. Select the required frequency for each string (10). The selected value will have a red circle.
11. Select (11) to save the NMEA profile.
12. Select  (12) to return to the system menu.

3.2.6 Setting the alarms

Alarms can be set to tell the operator if:

- The vehicle is moving off the wayline with the crosstrack alarm
- The vehicle is operating too quickly in reverse with the reverse alarm
- The position accuracy has degraded to a point where enabling fallback is necessary with the fallback alarm




This function is only available in advanced mode.



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Fig. 11

1. Select (1).
2. Select (2).
3. Select (3).
4. Select (4).
5. Select (5).
6. To enable the crosstrack alarm (6), make sure a (7) shows next to alarm enabled.

- a) Enter the desired value for the alarm threshold (8).
- b) Enter the desired value for the alarm delay (9).
7. To enable the reverse alarm (10), make sure a  (11) shows next to alarm enabled.
 - a) Enter the desired value for the alarm threshold (12).
 - b) Enter the desired value for the alarm delay (13).
8. To enable the fallback alarm (14), make sure a  (15) shows next to alarm enabled.
 - a) Enter the desired value for the alarm delay (16).
9. Select  (17) to return to the setup menu.

3.2.7 Delay times

Stand-by time

The stand-by time is the amount of time the TopDock stays on after the vehicle is turned off.

This feature eliminates convergence time. Convergence time is the amount of time necessary for the correction source to locate the vehicle's position when starting the vehicle again.

When starting the vehicle again, the terminal screen will be the same one shown when the vehicle was turned off.

Terminal wait delay time








The terminal wait delay time features is only enabled if there is more than one terminal connected to the TopDock on the same ISOBUS.

The terminal wait delay time is the amount of time the TopDock will wait after the system is turned on to find the preferred terminal.

After the set amount of time, if the TopDock does not find the preferred terminal, the system will connect to the alternative terminal.

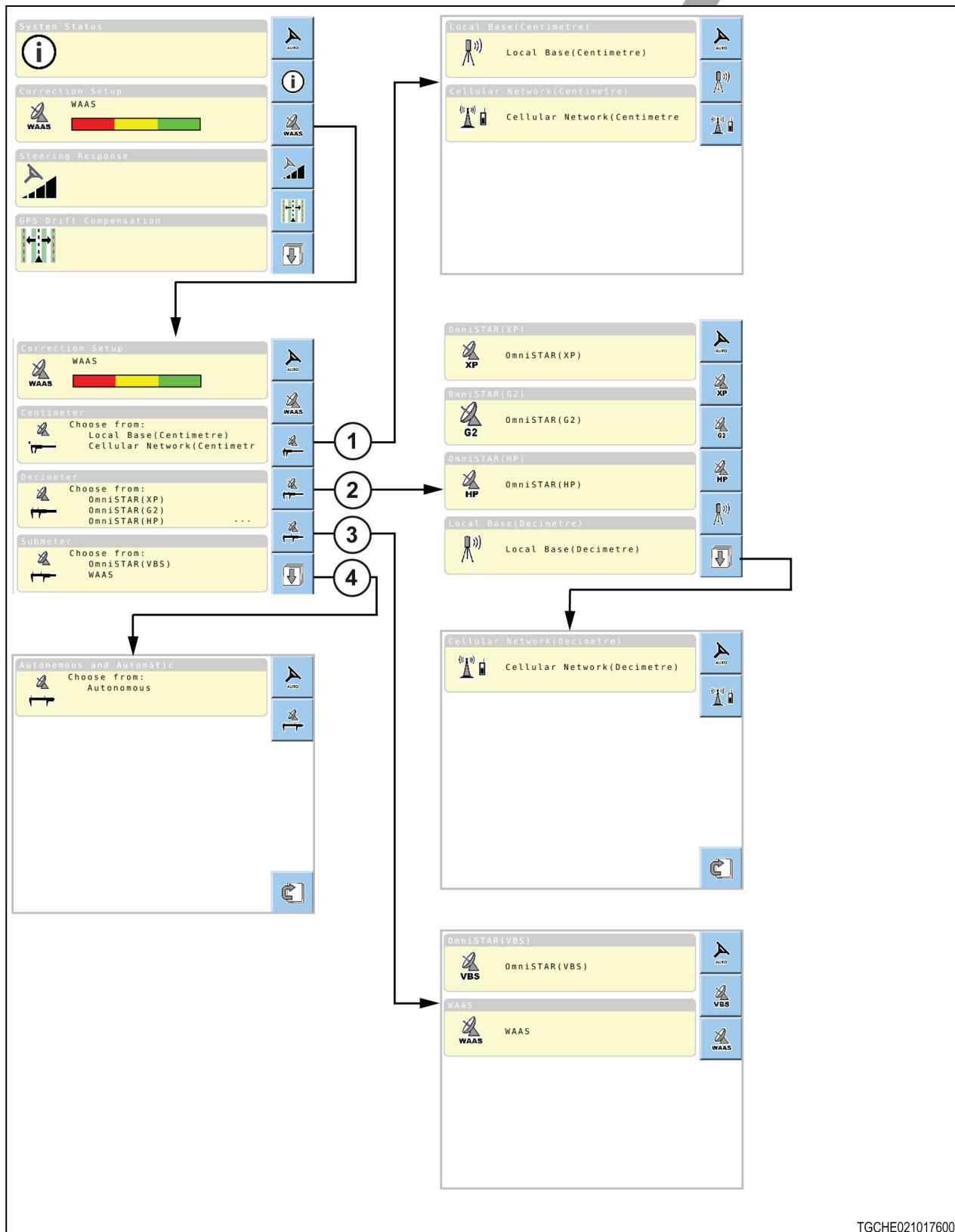
The delay time function is only available in advanced mode.

Setting the delay times

1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Select  (4).
5. Select  (5).
6. Enter the value for the stand-by time (6).
The default value is 30 minutes.
7. Enter the value for the terminal wait delay time (7).
The default value is 60 seconds.
 - Select  (8) to change to another terminal on the same BUS.
8. Select  (9) to return to the setup menu.

main graphic
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3.3 Correction setup



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Fig. 12

There are four correction source accuracy levels:

- Centimeter (1)
- Decimeter (2)
- Submeter (3)
- Autonomous and automatic (4)

Centimeter

Centimeter correction permits the most accurate positioning available, which is necessary for some operations. The first time a local base is configured, the operator makes a base profile that describes the specific settings of that local base.

- Local base (centimeter)
- Cellular network (centimeter)

Decimeter

Decimeter correction sources have an accuracy of approximately 40 cm (1.31 ft).

- OmniSTAR XP is a subscription based correction source.
 - If OmniSTAR is selected as the correction source, the guidance system must have a current OmniSTAR subscription or the guidance system will not engage.
 - See your dealer for more information about subscription based correction sources.
- OmniSTAR G2 is a subscription based correction source.
 - If OmniSTAR is selected as the correction source, the guidance system must have a current OmniSTAR subscription or the guidance system will not engage.
 - See your dealer for more information about subscription based correction sources.
- OmniSTAR HP is a subscription based correction source.
 - If OmniSTAR is selected as the correction source, the guidance system must have a current OmniSTAR subscription or the guidance system will not engage.
 - See your dealer for more information about subscription based correction sources.
- Local base (decimeter)
- Cellular Network (decimeter)
 - See your dealer for more information about using the cellular network as a correction source.

Submeter

Submeter accuracy is not as accurate as decimeter or centimeter accuracy.

- A space based augmentation systems (SBAS) is a non-subscription based service that is different between regions.
 - Wide area augmentation system (WAAS) - available in the United States and Canada
 - European geostationary navigation overlay service (EGNOS) - available in Europe
 - Multi-functional satellite augmentation system (MSAS) - available in Japan and China
- OmniSTAR VBS is a subscription sub-meter based correction source.
 - If OmniSTAR is selected as the correction source, the guidance system must have a current OmniSTAR subscription or the guidance system will not engage.
 - See your dealer for more information about subscription based correction sources.

Autonomous and automatic

If no correction source is set up, the guidance system can be set to operate in autonomous mode.

The position accuracy required for automatic steering.

Mode	Accuracy without fallback		Accuracy with fallback	
	meters	feet	meters	feet
Autonomous	3.5	11.5	5.0	16.4
WAAS	1.5	4.9	2.0	6.6
EGNOS	1.5	4.9	2.0	6.6
MSAS	1.5	4.9	2.0	6.6
OmniSTAR VBS	1.5	4.9	2.0	6.6
OmniSTAR HP	0.15	0.5	1.5	4.9
OmniSTAR G2	0.35	1.15	1.5	4.9
OmniSTAR XP	0.35	1.15	1.5	4.9

3.3.1 Selecting a correction source

NOTE: In this example a local base station for centimeter accuracy is used as the correction source.

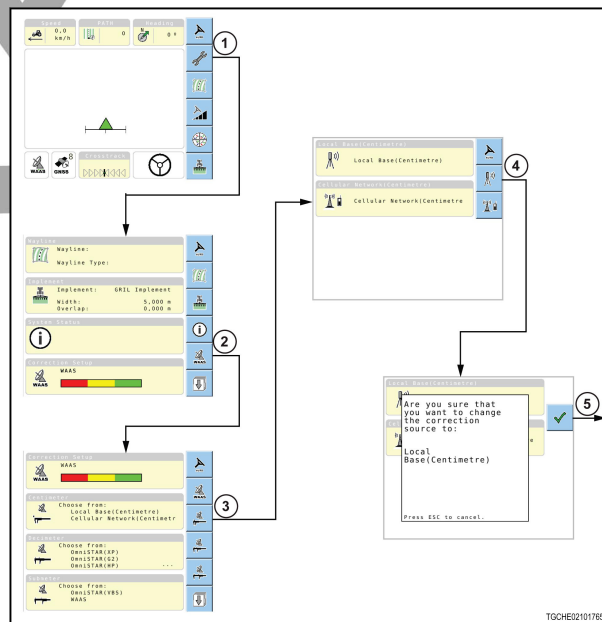


Fig. 13

1. Select (1).
2. Select the correction source icon (2).
The icon can be different depending on which correction source is selected.
3. Select (3).
4. Select (4).
A prompt will show to make sure the operator wants the change to the correction source.

5. Select (5).
The display changes to an information screen.

NOTE: Each type of correction source will have a different information screen with configuration information. See the information for configuring correction sources.

3.3.2 Configuring autonomous correction source

Select autonomous as the correction source for the system. Once the system has accepted the autonomous correction source, the autonomous information box will show on the terminal.

1. Select the box (1). This feature provides a more accurate reading of (GNSS) signals.

- Engaged
- Disengaged

2. Select the box (2).

- Engaged to allow fallback
- Disengaged

3. Select (3) to keep the autonomous configuration.

The terminal will show the correction setup screen.

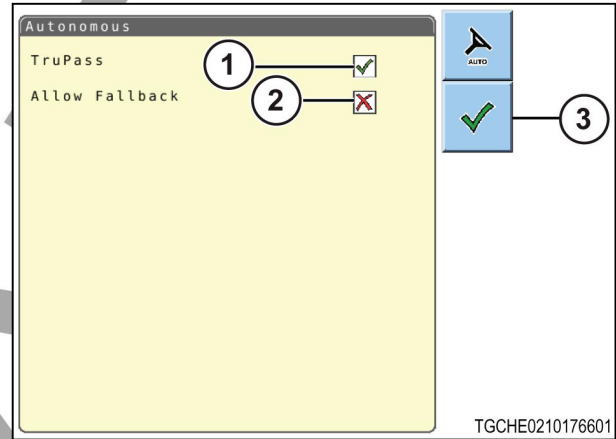


Fig. 14

3.3.3 Configuring a space based augmentation system (SBAS) correction source

Select the space based augmentation system (SBAS) available for the region as the correction source for the system. Once the system has accepted the SBAS correction source the information box will show on the terminal.

1. Select the box (1).

- Engaged
- Disengaged

2. Select (2) to keep the configuration.
The terminal will show the correction setup screen.

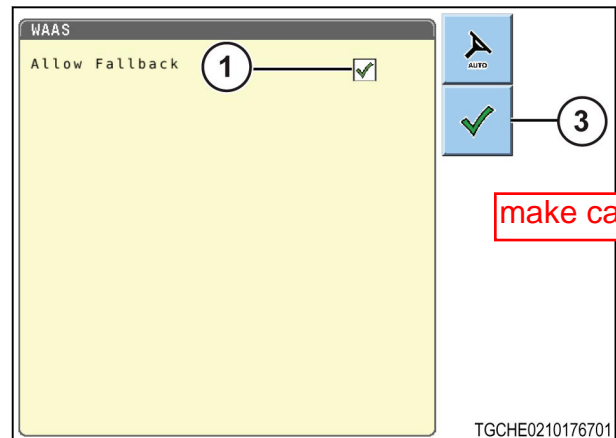


Fig. 15

3.3.4 Configuring an OmniSTAR correction source

Select an OmniSTAR correction source as the correction source for the system. Once the system has accepted the OmniSTAR correction source the information box will show on the terminal.

The screen shows a list of all OmniSTAR correction sources.

- Subscription is current and the expiration date (1)
- Subscription not current (2)

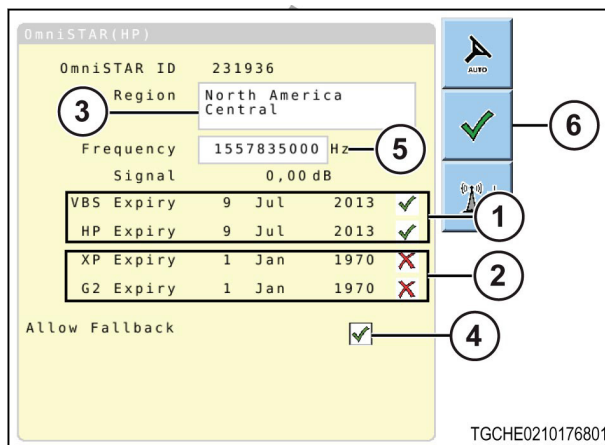


Fig. 16

1. Select the correct region (3).
2. Select the fallback box (4).
 - Engaged to allow fallback
 - Disengaged
3. The frequency (5) must only be updated if notified by the correction source company that they frequency has changed.
4. Select (6) to keep the correction source configuration. The terminal will show the correction setup screen.

3.4 Vehicle profile

Vehicle profiles are only available in advanced mode.

A vehicle profile must be selected before automatic steering can be engaged.

make graphics
page wide

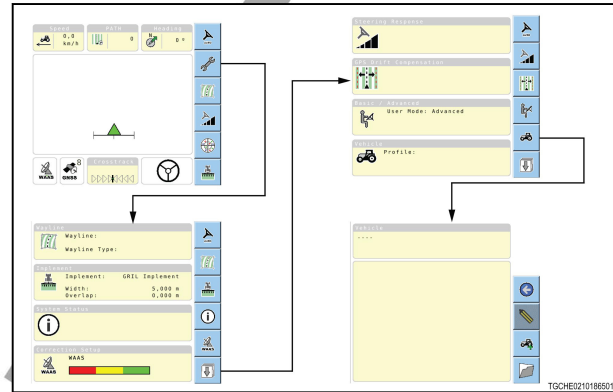




Fig. 17

3.4.1 Making a vehicle profile

A tractor is used as the vehicle in this example.

1. Select  (1).
2. Select the vehicle type (2).
3. Select the name box (3) to edit the vehicle name.
4. The terminal will show a keyboard. Select the checkmark icon to save the changes.
5. Enter the correct dimension information (4). Dimension information will be different for each type of machine.
6. Select  (5). The terminal will show the steering subsystem setup.

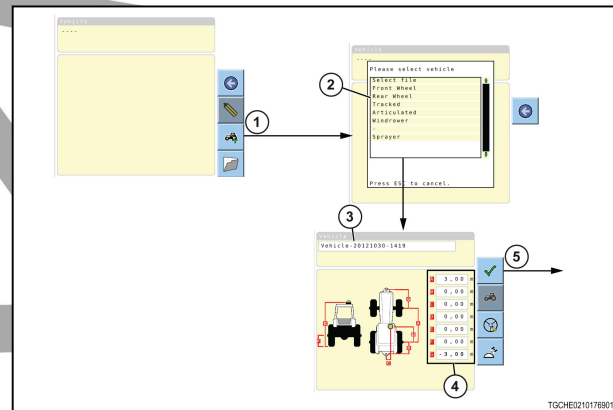
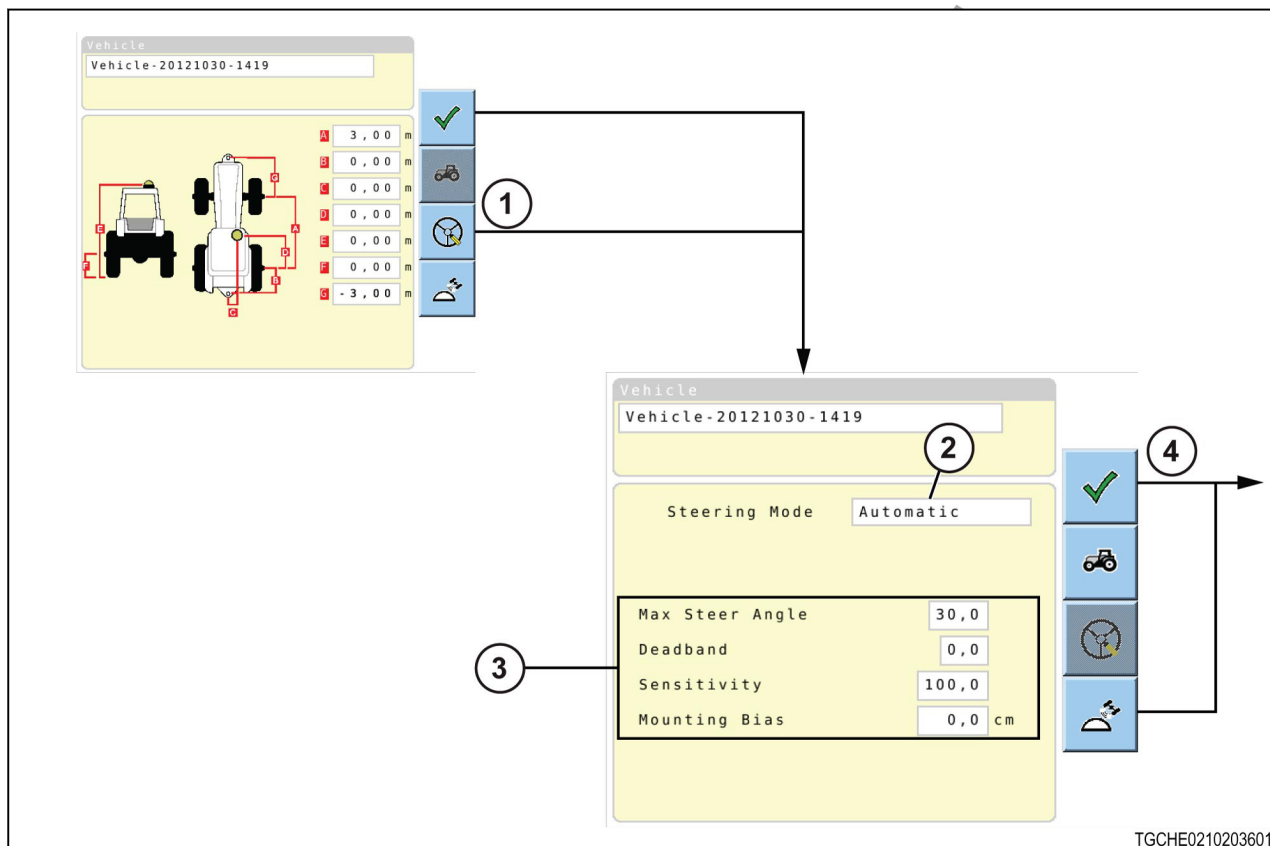


Fig. 18



3.4.2 Selecting a steering subsystem

Make and name a vehicle profile before selecting a steering subsystem.



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Fig. 19

1. Select  (1) from the vehicle profile icon list.
2. Select the box (2) next to the steering mode.
 - Automatic is default for the steering mode if the system automatically finds a PVED, ACU-1 or MT Track steering subsystem.
 - If an AES-25 or FENDT steering subsystem is used select AES-25 or FENDT as the steering subsystem.
3. Enter the additional information as necessary (3).
The additional information will be different for each type of steering mode selected.
4. Select  (4) to save the information.
The terminal will show the external antenna position setup.

3.4.3 Indicating an external antenna position

Make and name a vehicle profile and select a steering subsystem before indicating an external antenna position.

For some vehicles, the TopDock cannot get the global navigation satellite system (GNSS) and the correction source signals because part of the vehicle is an obstruction. In such conditions, use an external antenna to relay the signals to the TopDock.

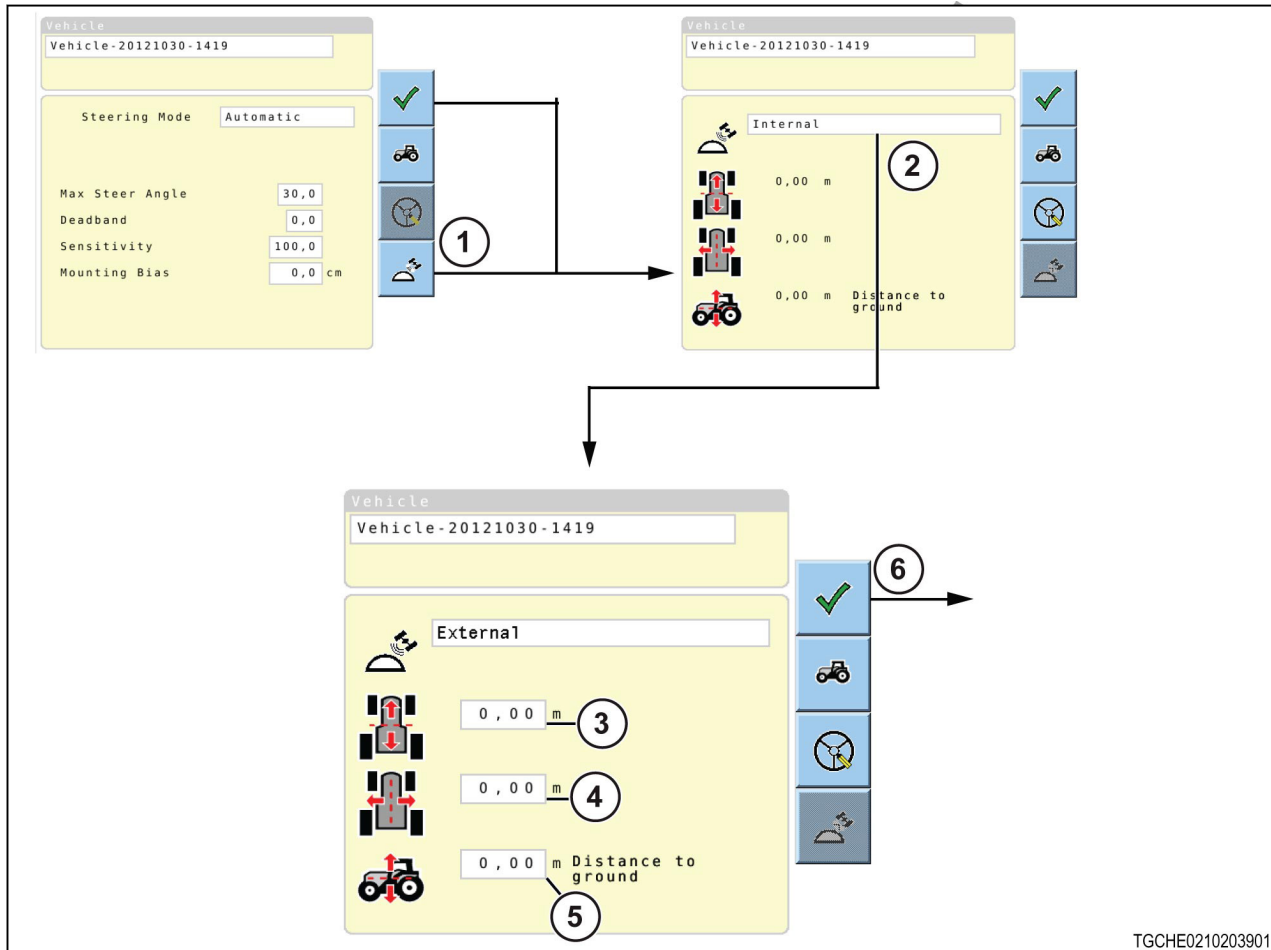





Fig. 20

1. Measure the distance from the center of the TopDock to the antenna reference point, along the X axis and the Y axis.
The location of the antenna reference point will be different for each type of antenna. See the manufacturer's manual for more information on the location of the reference position of the antenna.
2. Measure the distance from the point on the ground directly below the external antenna to the antenna reference point.
3. Select the  (1).
4. Select the box (2) next to the . Make sure the antenna type is external.
5. Enter the distance measurement values.
 - Forward/back distance (3)
A positive value indicates the antenna location is in front of the receiver.
A negative value indicates the antenna location is to the rear of the receiver.
 - Right/left distance (4)
A positive value indicates the antenna location is to the right-hand side of the receiver.
A negative value indicates the antenna location is to the left-hand side of the receiver.
 - Distance to the ground (5)
6. Select  to return to the setup menu. add callout 6 to text

3.4.4 Loading a vehicle profile

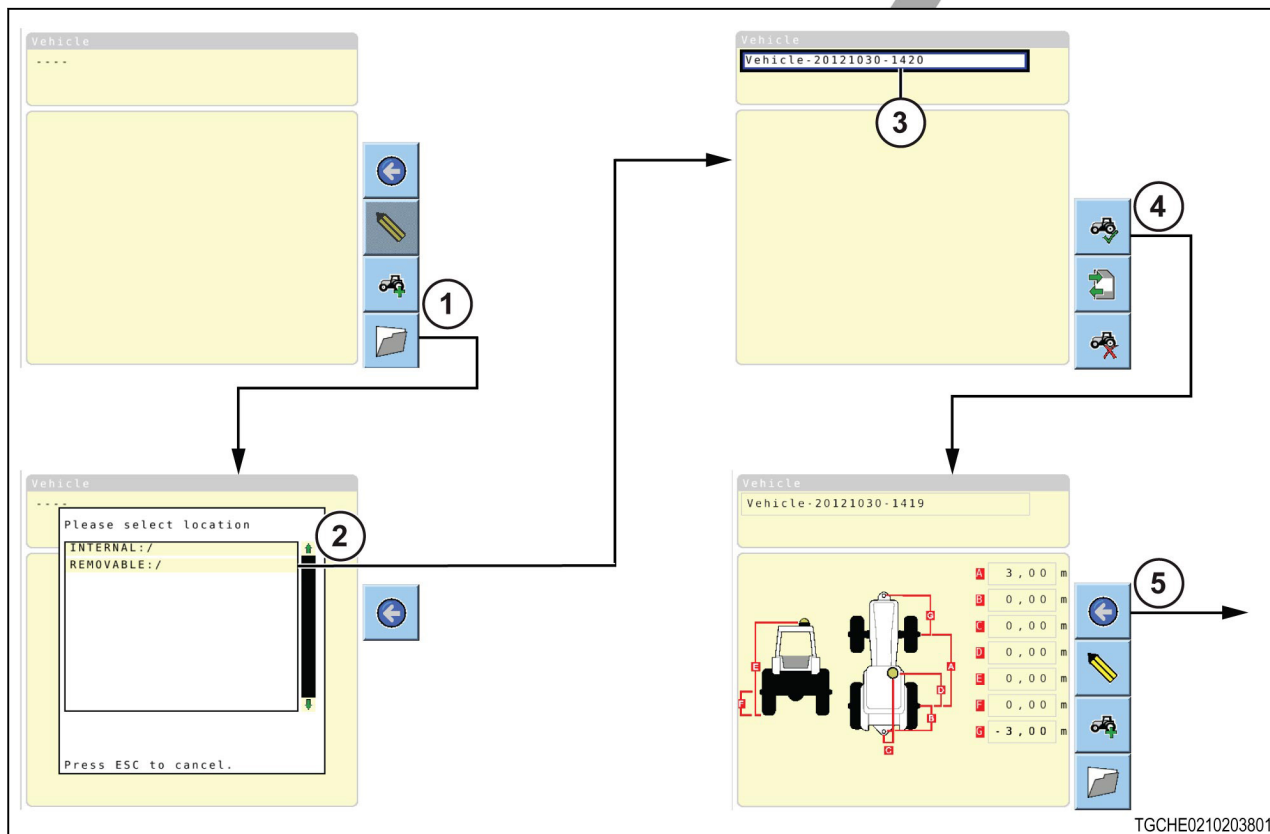





Fig. 21

1. Select  (1).
2. Select the desired vehicle profile (2) from the list.
If selecting a vehicle profile from an external memory device, the vehicle profiles will show as .ini files. A / after a name indicates a folder which contains other folders and/or files.
The vehicle profile will load to the system and the name (3) will be shown on the screen.
3. Select  (4).
4. Select  (5) to return to the setup menu.

3.4.5 Changing vehicle profile information

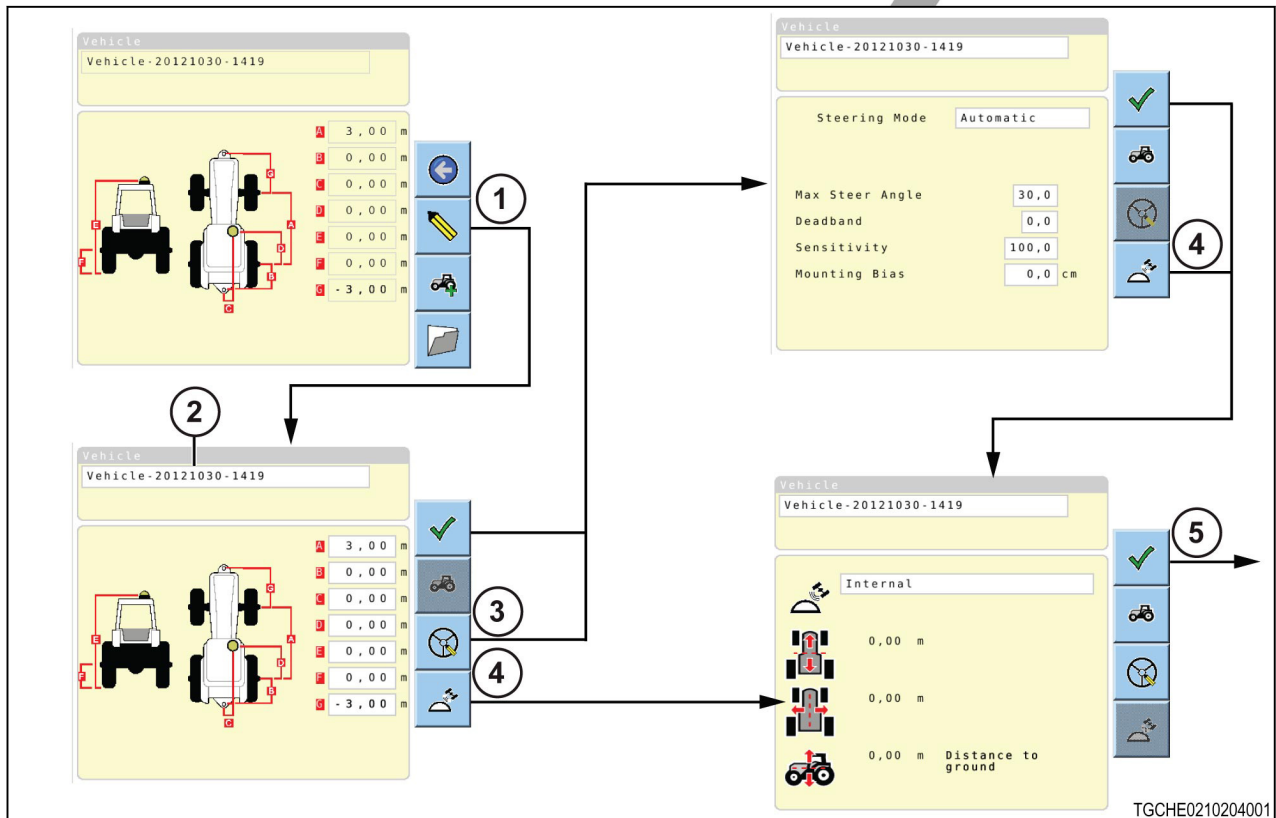




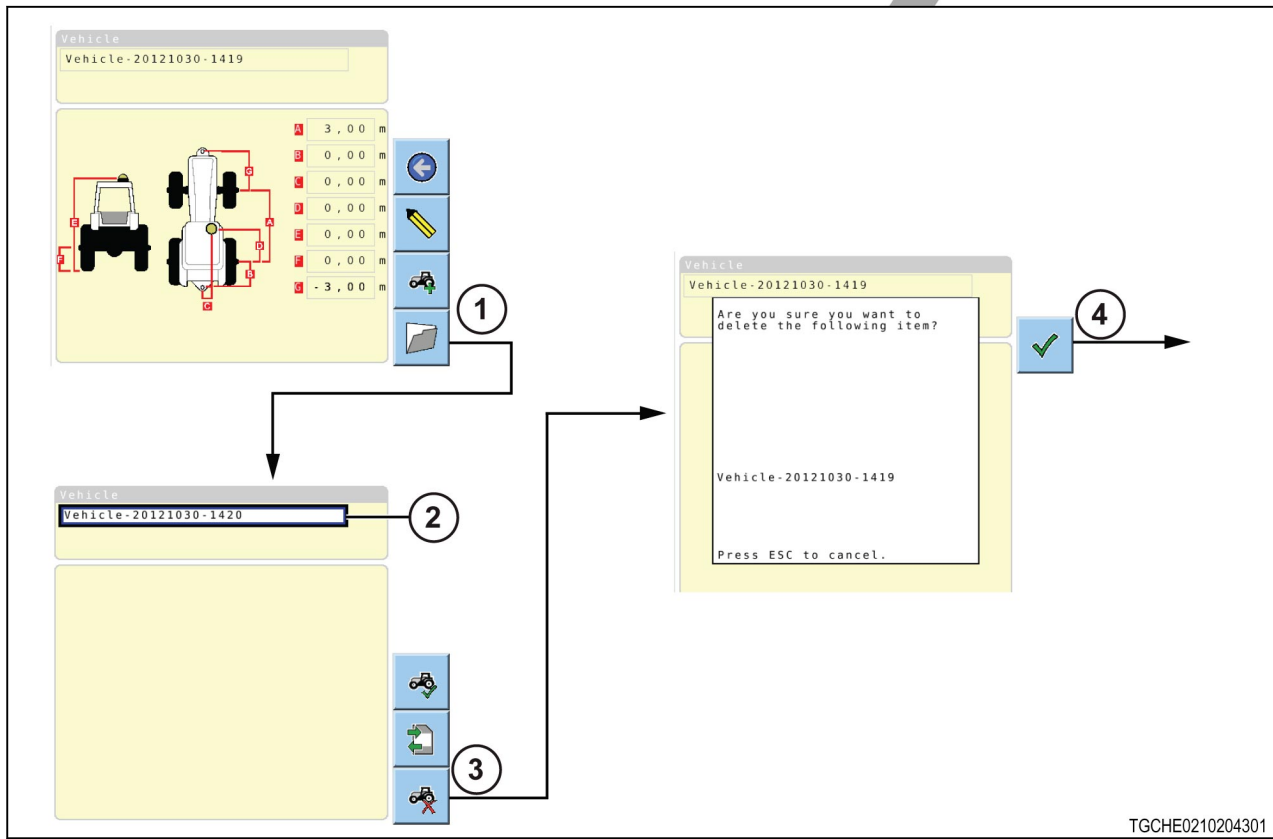


Fig. 22




1. Select  (1).
2. To change the vehicle profile name, select the name box (2).
3. Select  (3) to change the system subsystem information.
4. Select  (4) to change the external antenna information.
5. Select  (5) to return to the setup menu.

3.4.6 Removing a vehicle profile



TGCHE0210204301

Fig. 23

1. Select  (1).
2. Select the name box (2).
3. Select the desired vehicle profile from the menu.
4. Select  (3).
5. Select  (4) to confirm.

3.5 Implement profile

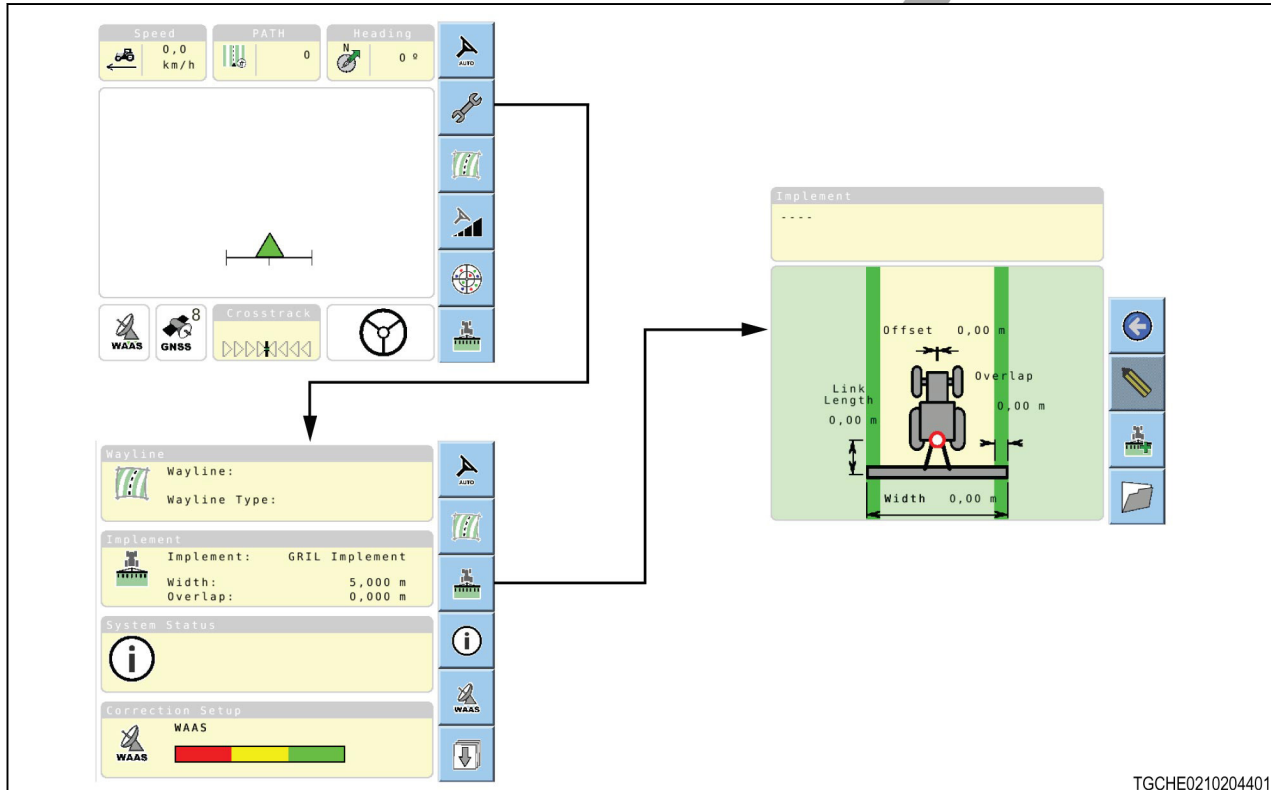


Fig. 24

An implement profile includes:

- Implement type and location in relation to the vehicle and the direction of travel
- Implement width
- Implement offset
- Link length

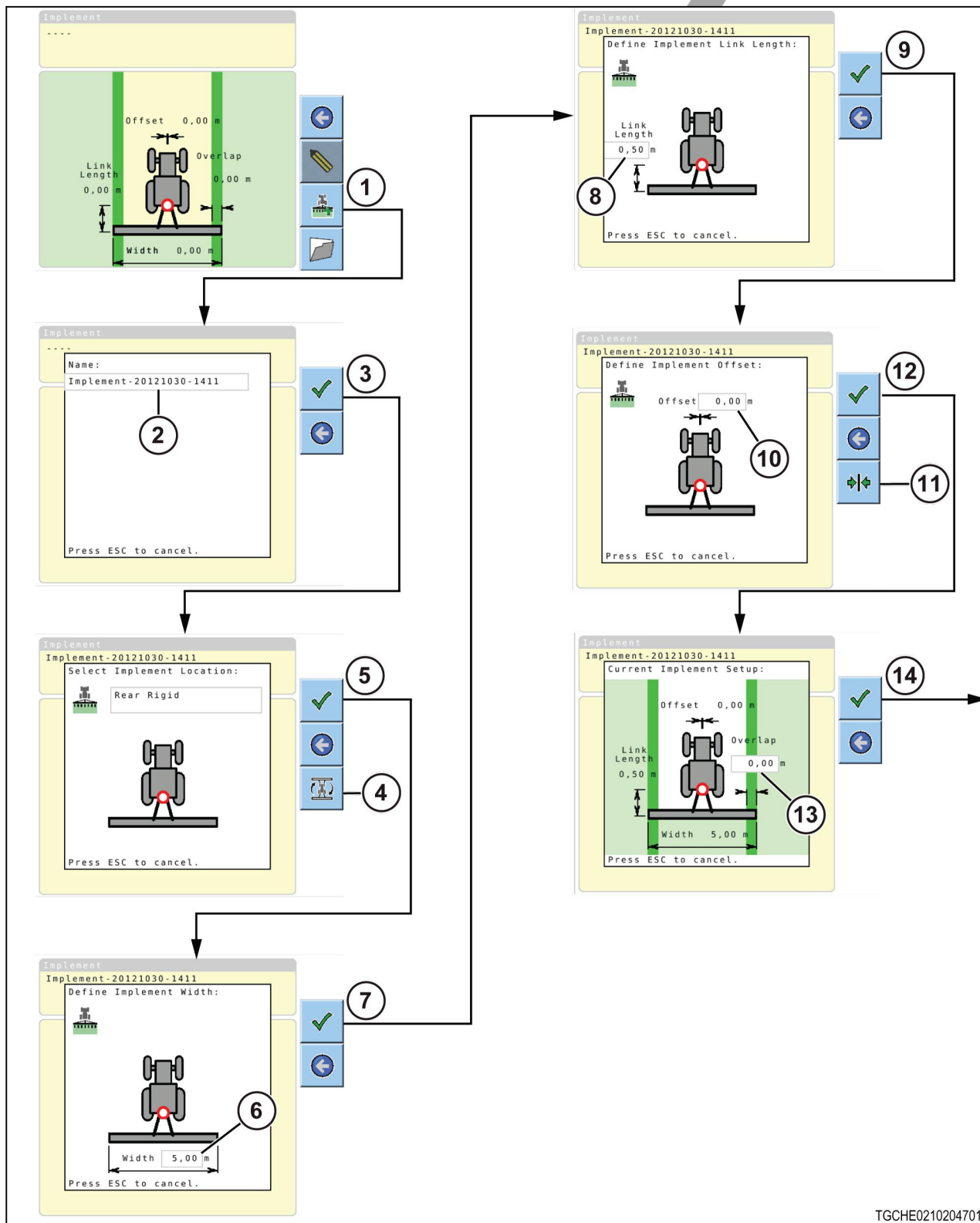
The width of an implement and the overlap amount will determine the swath width. The swath width determines the distance between the waylines.

Get the following measurements before making an implement profile:

- Implement width
- Offset
- Link length
- Overlap

Measurements that are not accurate will cause problems with the system precision. The recommended tolerance is ± 5 cm (± 1.97 in).





3.5.1 Making an implement profile







TGCHE0210204701

Fig. 25

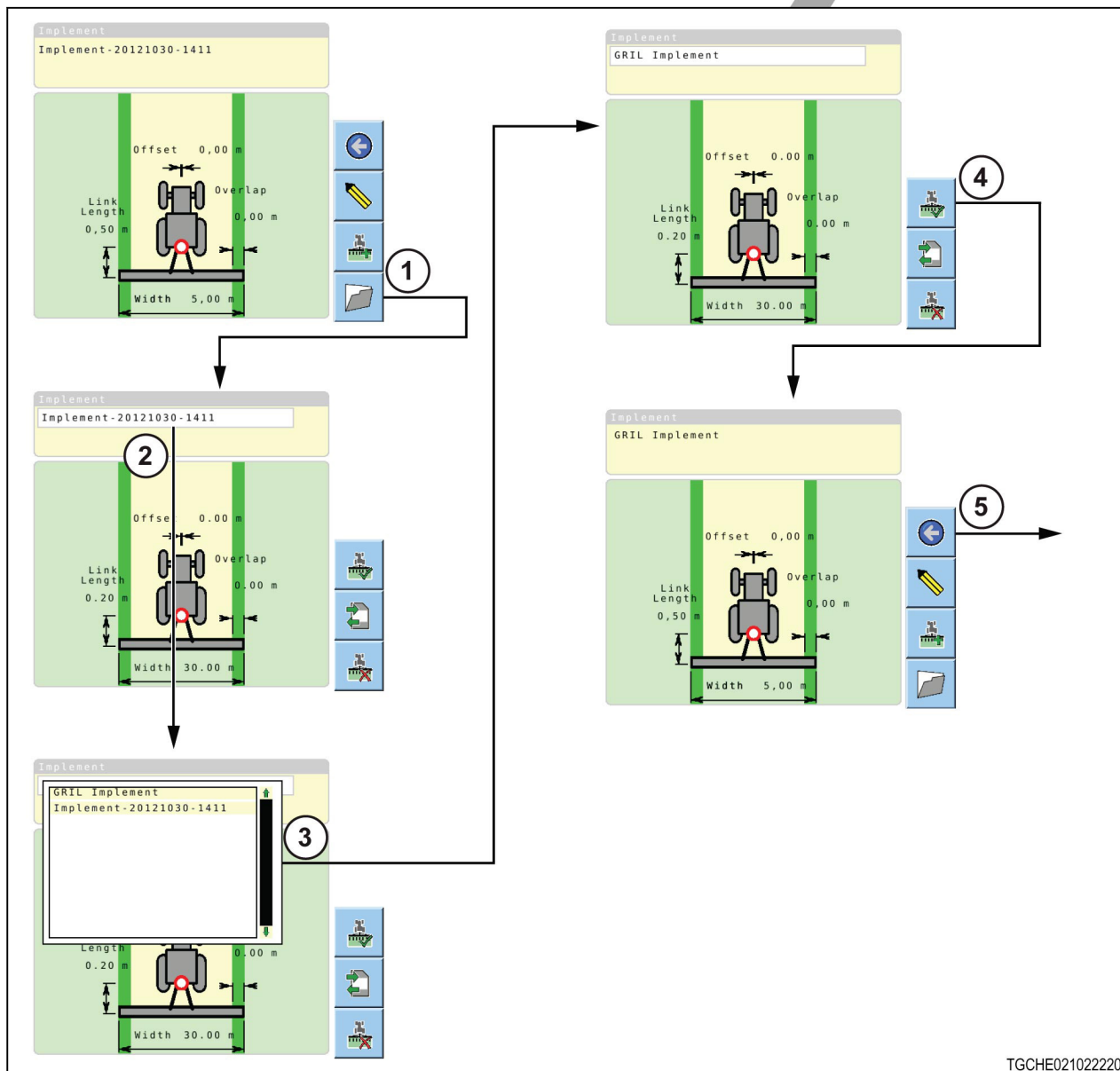
1. Select (1).

2. Select the name box (2) to change the name.
3. Select  (3).
4. Select  (4) to move through the implement types.
 - Rear rigid
 - Rear trailed
 - Front rigid
5. Select  (5).
6. Enter the implement width value (6).
7. Select  (7).
8. Enter the link length value (8).

The link length value is the distance between the drawbar point and the working part of the implement.
9. Select  (9).
10. Enter the offset value (10).




The offset value is the distance the implement is to the right or left of the drawbar point. A positive value indicates the implement is to the right-hand side of the drawbar point. A negative value indicates the implement is to the left-hand side of the drawbar point. If the implement is centered on the drawbar point, the offset must be set to zero.
11. Select  (11) to center the implement.
11. Select  (12).
12. Enter the overlap value (13).
13. Select  (14) to return to the setup menu.

3.5.2 Selecting an implement profile



TGCHE0210222201

Fig. 26

1. Select  (1).
2. Select the name box (2).
3. Select the desired implement (3).
4. Select  (4).
5. Select  (5) to return to the setup menu.

3.5.3 Editing an implement profile

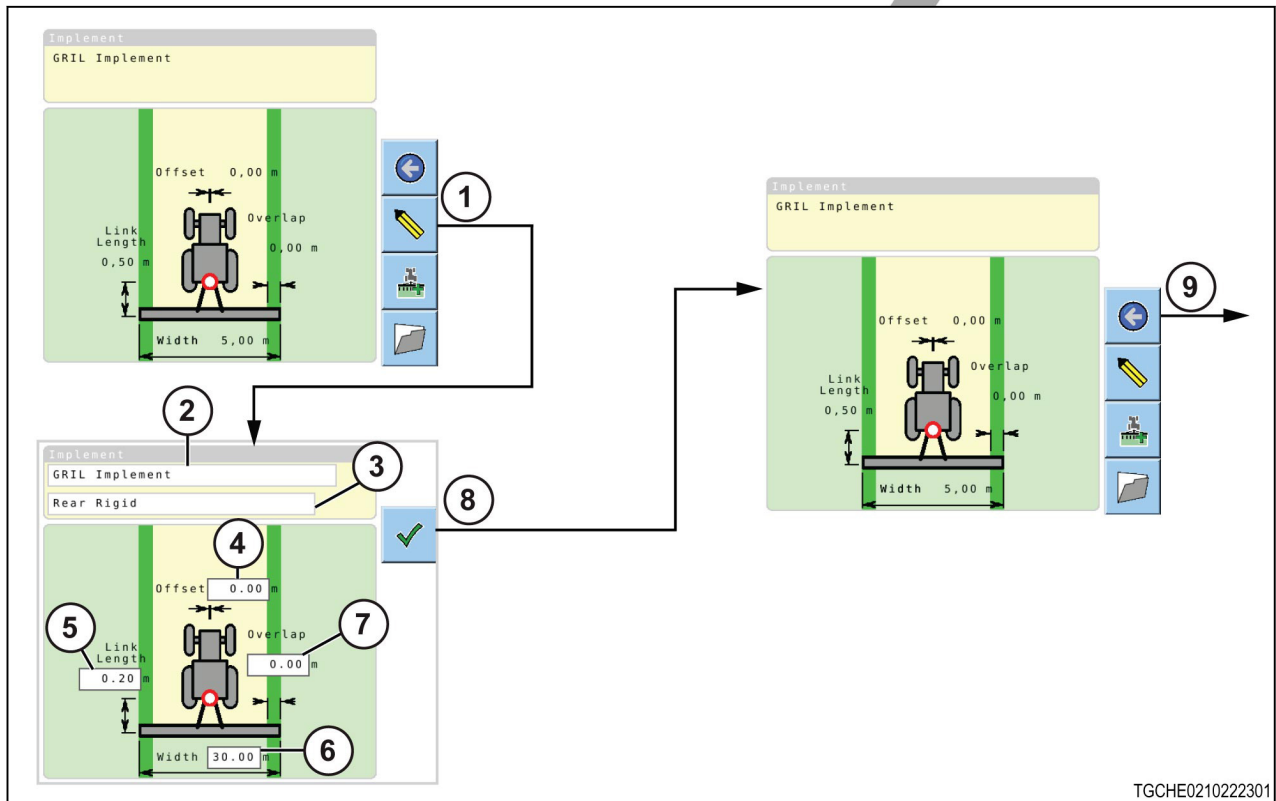





Fig. 27

1. Select  (1).
2. Edit the fields as necessary.
 - Implement name (2)
 - Implement type (3)
 - Offset value (4)
 - Link length (5)
 - Implement width (6)
 - Overlap value (7)
3. Select  (8).
4. Select  (9) to return to the setup menu.

3.5.4 Deleting an implement profile

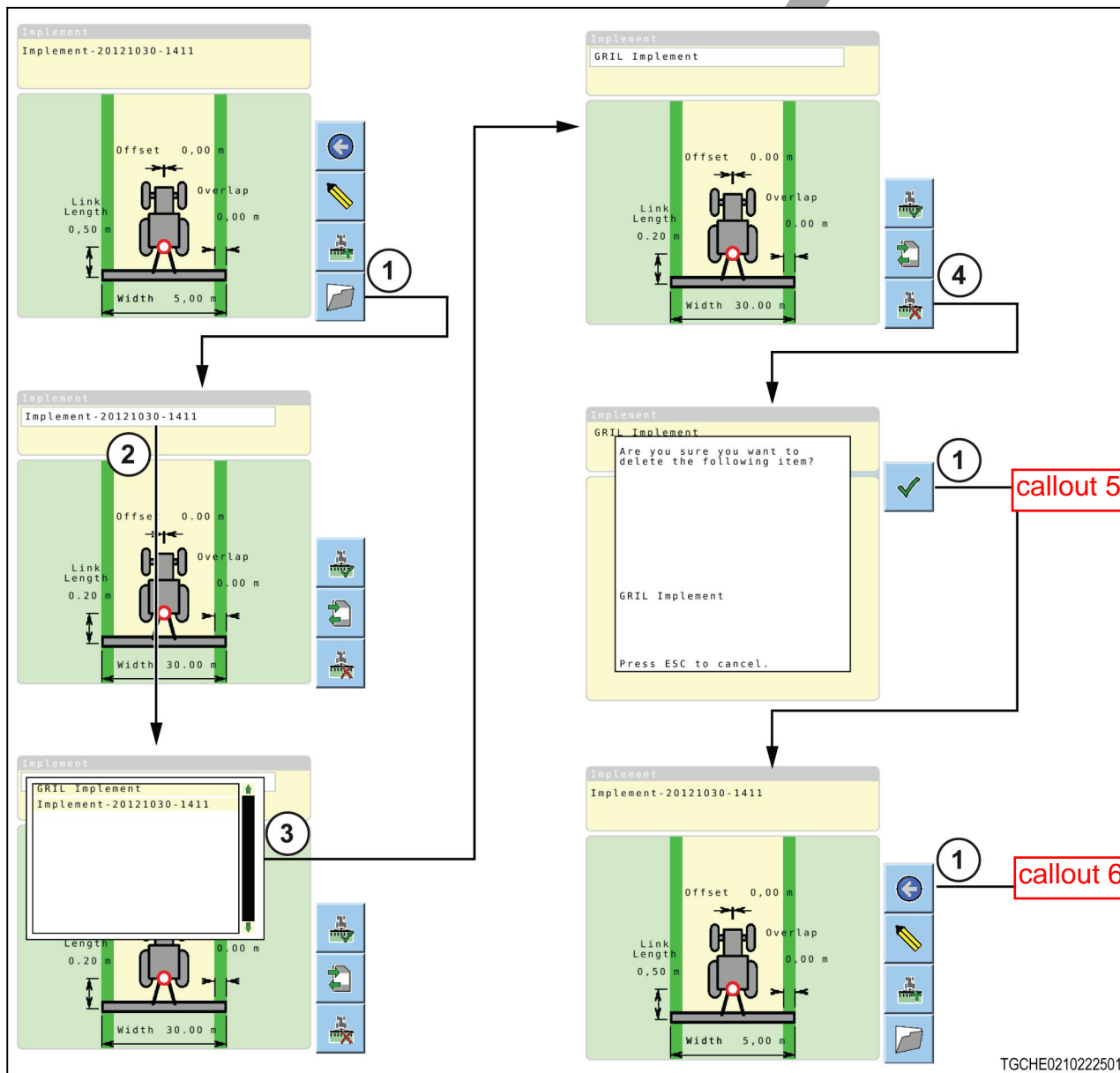
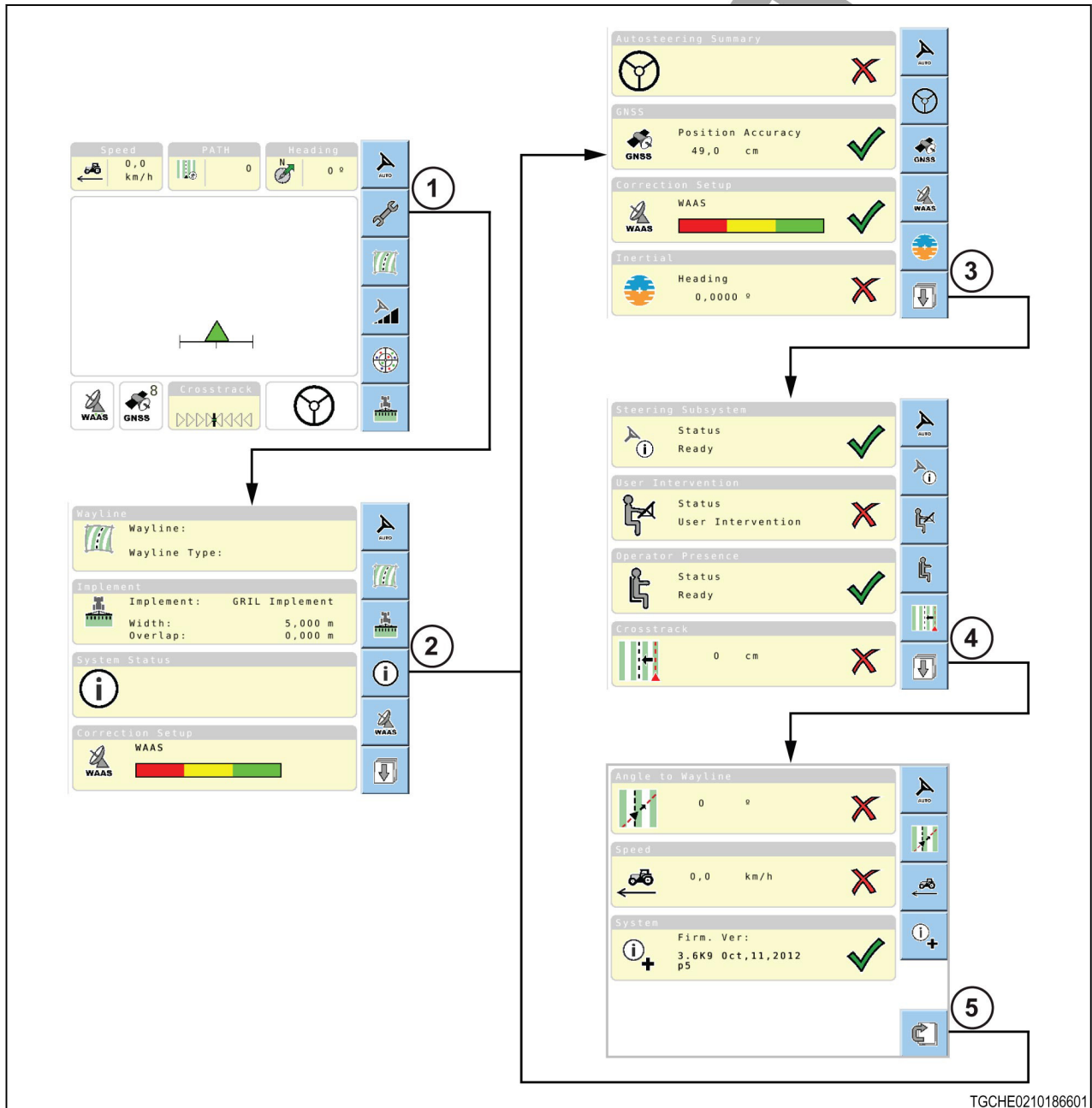


Fig. 28

1. Select (1).
2. Select the name box (2).
3. Select the desired implement (3).
4. Select (4).
5. Select (8). callout 5 and 6
6. Select (5) to return to the setup menu.





3.6 System status


3.6.1 Checking the system status



TGCH0210186601

Fig. 29

1. Select  (1).
2. Select  (2).
3. Select  (3) to see the second screen of the menu.
4. Select  (4) to see the third screen of the menu.

5. Select  (5) to return to the first screen of the menu.

3.6.2 GNSS information

The Global Navigation Satellite System (GNSS) is used to pinpoint the location of the user's receiver any where in the world.

At this time, GNSS consists of two main satellite systems:

- GLONASS - Global Navigation Satellite System (Russian GNSS)
- GPS - Global Positioning System (US GNSS)

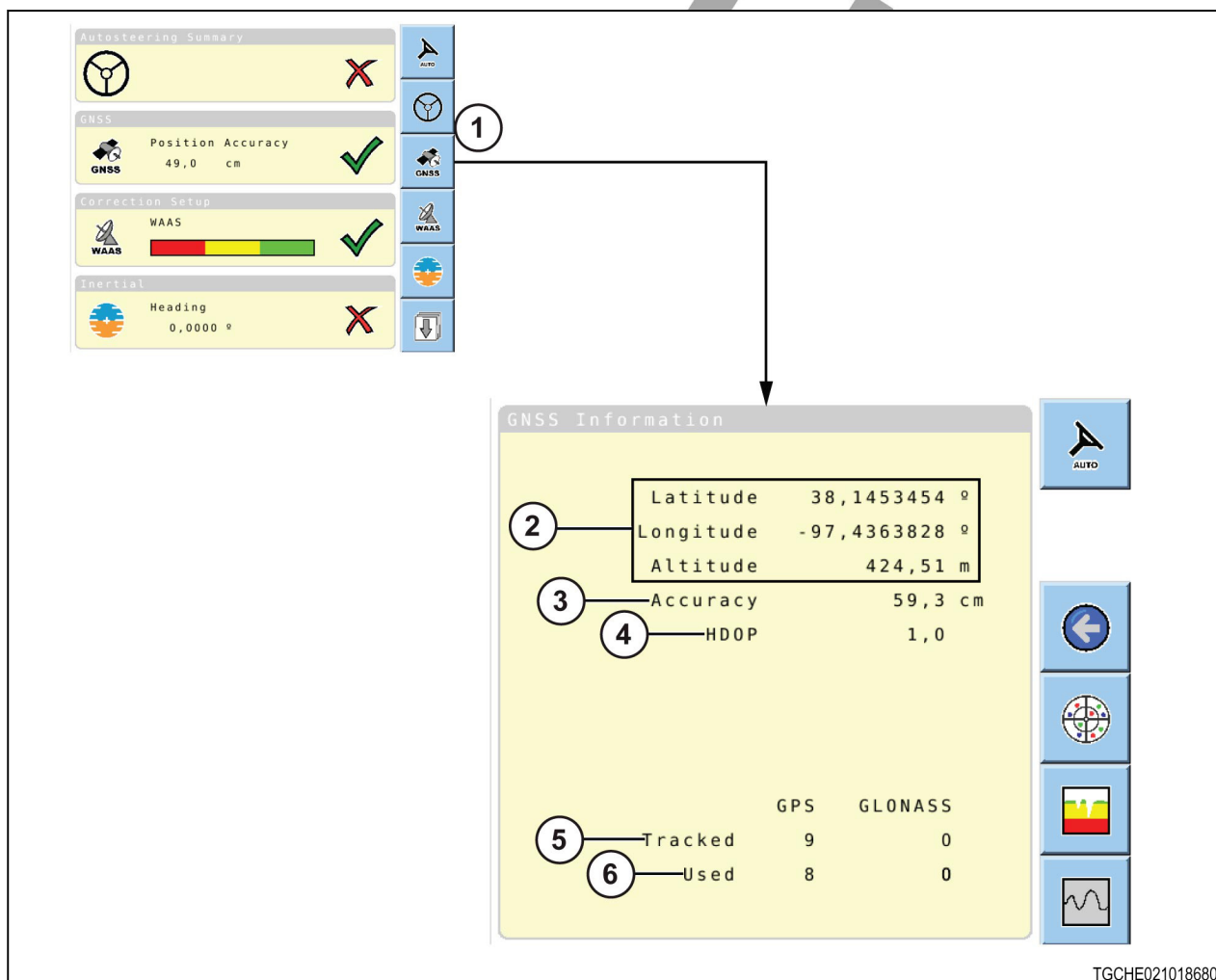



Fig. 30

From the system status menu, select  (1).

The GNSS information includes:

- Position information (2)
- Signal accuracy (3)
- Horizontal dilution of precision (HDOP) (4)- A measure of the geometric quality of a GPS satellite configuration in the sky. HDOP is a factor in determining the relative accuracy of a horizontal position. The smaller the DOP number, the better the geometry.
- The number of satellites the system is receiving data from (5)
- The number of satellites the system is using (6)

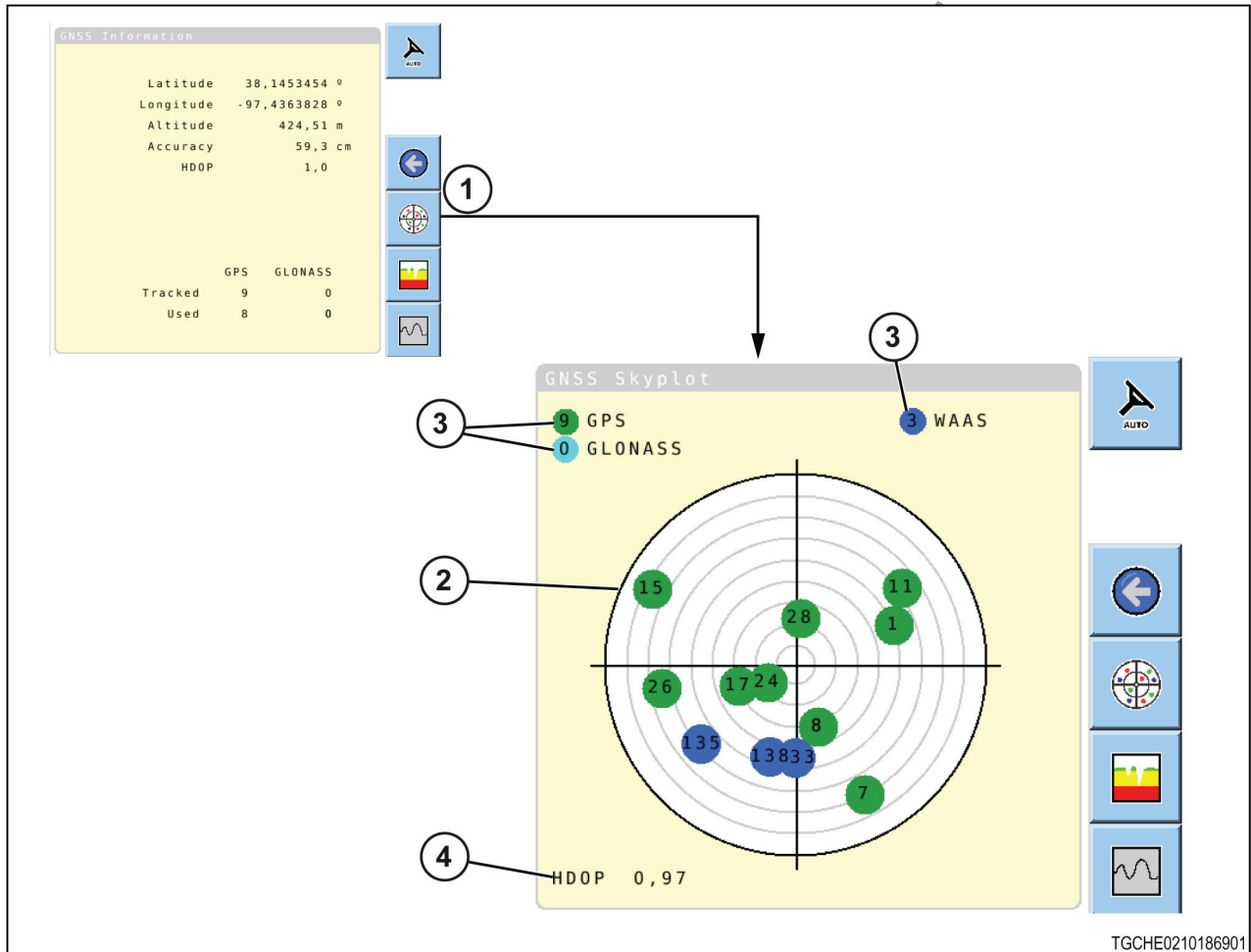


Fig. 31

To see the location of the satellites in use, select  (1).

The Skyplot (2) gives a topdown view of where the satellites are in relation to the machine with north at the top. The outer circle represents the horizon and the center circle represents directly above the machine. The number in each small circle within the plot represents each satellites ID.

The type and number of satellites tracked (3) are displayed at the top, along with the HDOP (4) value at the bottom.

NOTE: The correction sources will be different depending on location and subscription service.

Select  to return to the previous screen.

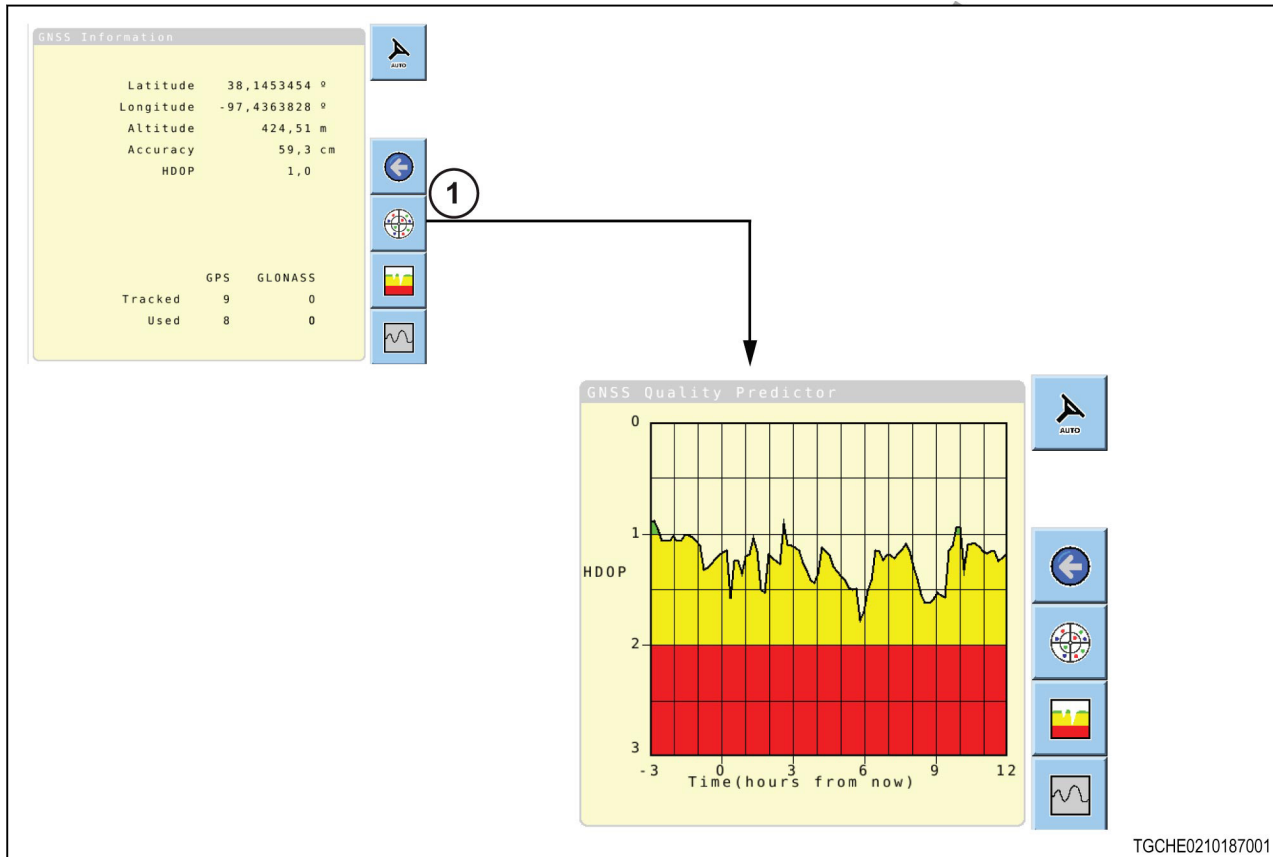



Fig. 32

To see the predicted forecast of Horizontal Dilution of Precision (HDOP), select  (1).

Select  to return to the previous screen.

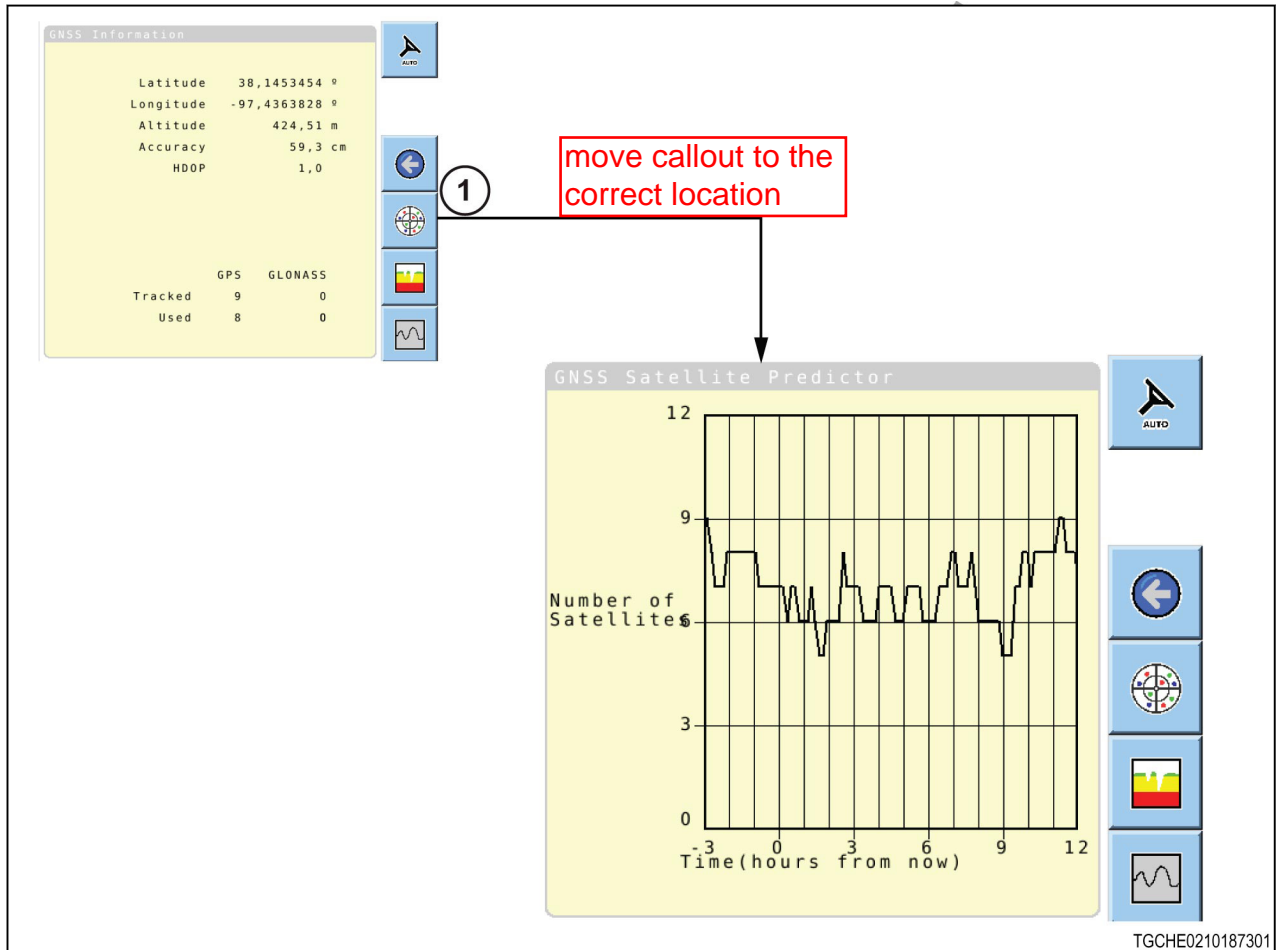




Fig. 33

To see the number of satellites that are predicted to be available over a period of time, select  (1).

Select  to return to the previous screen.

3.6.3 Correction setup

The type correction sources available are:

- OmniSTAR, subscription based correction source with several levels of accuracy.
- A non-subscription space based augmentation systems (SBAS) service that differs between regions.
 - Wide area augmentation system (WAAS) - available in the United States and Canada
 - European geostationary navigation overlay service (EGNOS) - available in Europe
 - Multi-functional satellite augmentation system (MSAS) - available in Japan and China

NOTE: The correction source icon can be different depending on the correction source selected.

Subscription based correction source

From the system status menu, select

If an OmniSTAR correction source has been selected, the screen will show information for the selected subscription based correction source (1). Each OmniSTAR correction source will show if the subscription is current by showing the expiration

date and (2) . '1 Jan 1970' and (3) indicates there is no current subscription.

Fallback (4) will be enabled or disabled .

The quality of the signal is indicated in the color of the circle (5).

Select (6) to return to the previous screen.

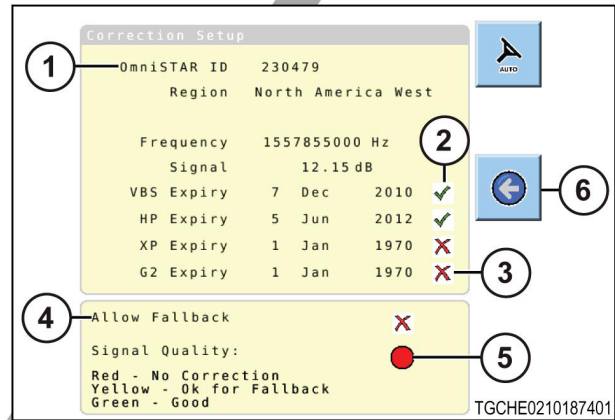


Fig. 34

SBAS correction source

From the system status menu, select

If an SBAS correction source the screen will show satellite and signal quality information (1).

Fallback (2) will be enabled or disabled .

The quality of the signal is indicated in the color of the circle (3).

Select (4) to return to the previous screen.

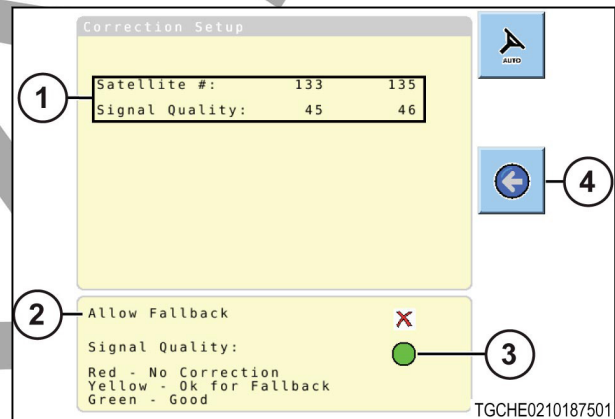


Fig. 35

No correction source or Autonomous selected

From the system status menu, select

TruPass (1) will be enabled or disabled . TruPass will be enabled is a feature which enables more accurate indication of GNSS signals when in Autonomous mode

Fallback (2) will be enabled or disabled .

The quality of the signal is indicated in the color of the circle (3).

Select (4) to return to the previous screen.

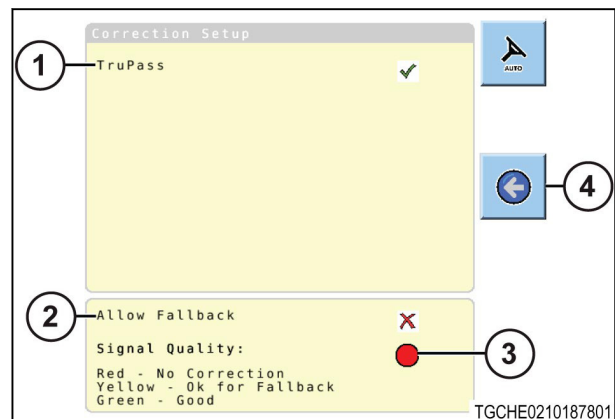


Fig. 36

3.6.4 Inertial information

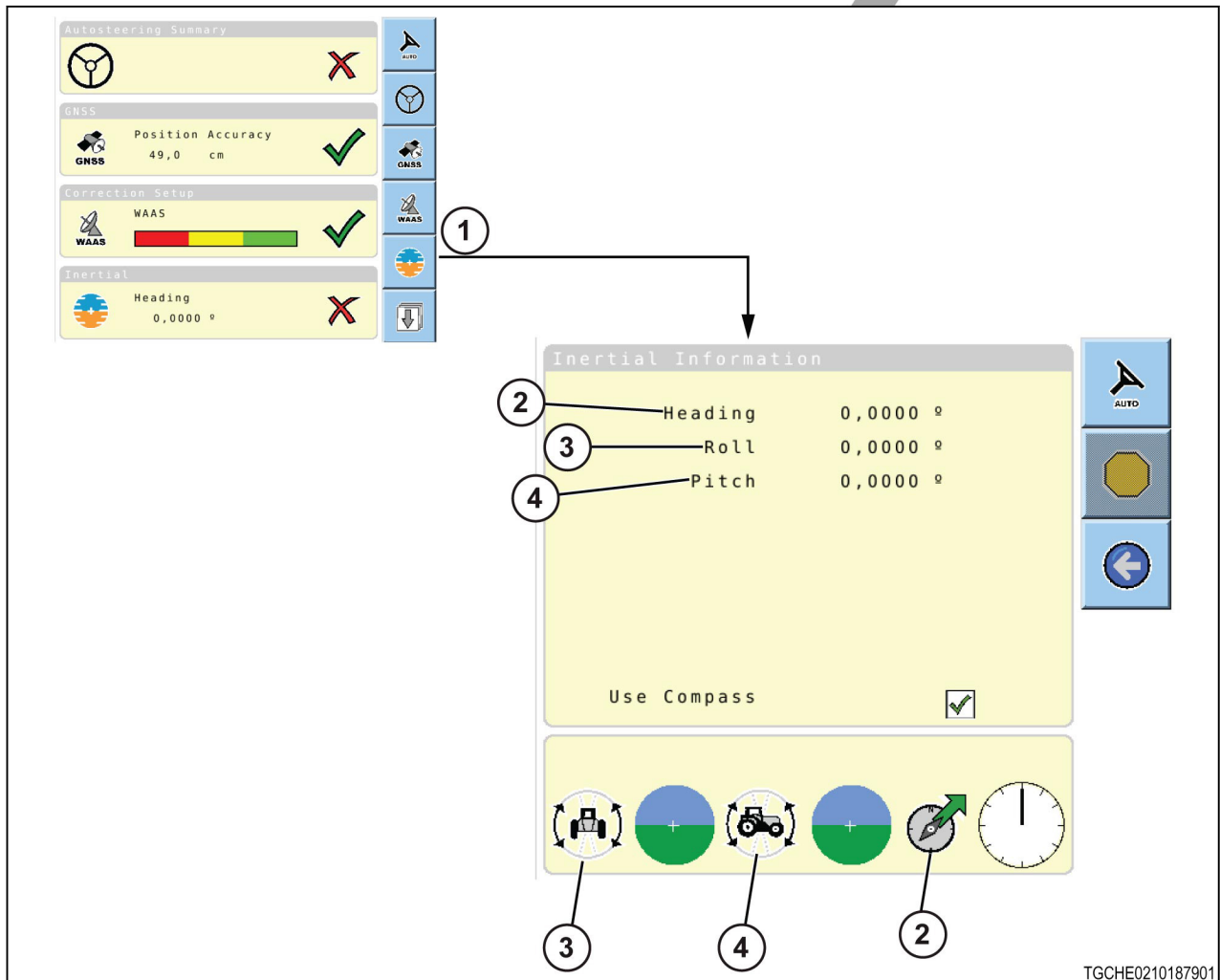



Fig. 37


From the system status menu, select  (1).

Inertial information refers to the direction and position of the vehicle.

Inertial information includes:

- Heading (2)- This information refers to the direction the vehicle is pointing at this time.
- Roll (3) - This information refers to the side by side tilting movement of the vehicle.
- Pitch (4)- This information refers to the forward and rearward tilting movement of the vehicle.

NOTE: On start up, the receiver can show the vehicle is moving in the opposite direction from actual travel. Calibrate the compass again if the compass is engaged or select # if the compass is not engaged. See the information for calibrating the compass.

Select  to return to the previous screen.

3.6.5 Steering subsystem

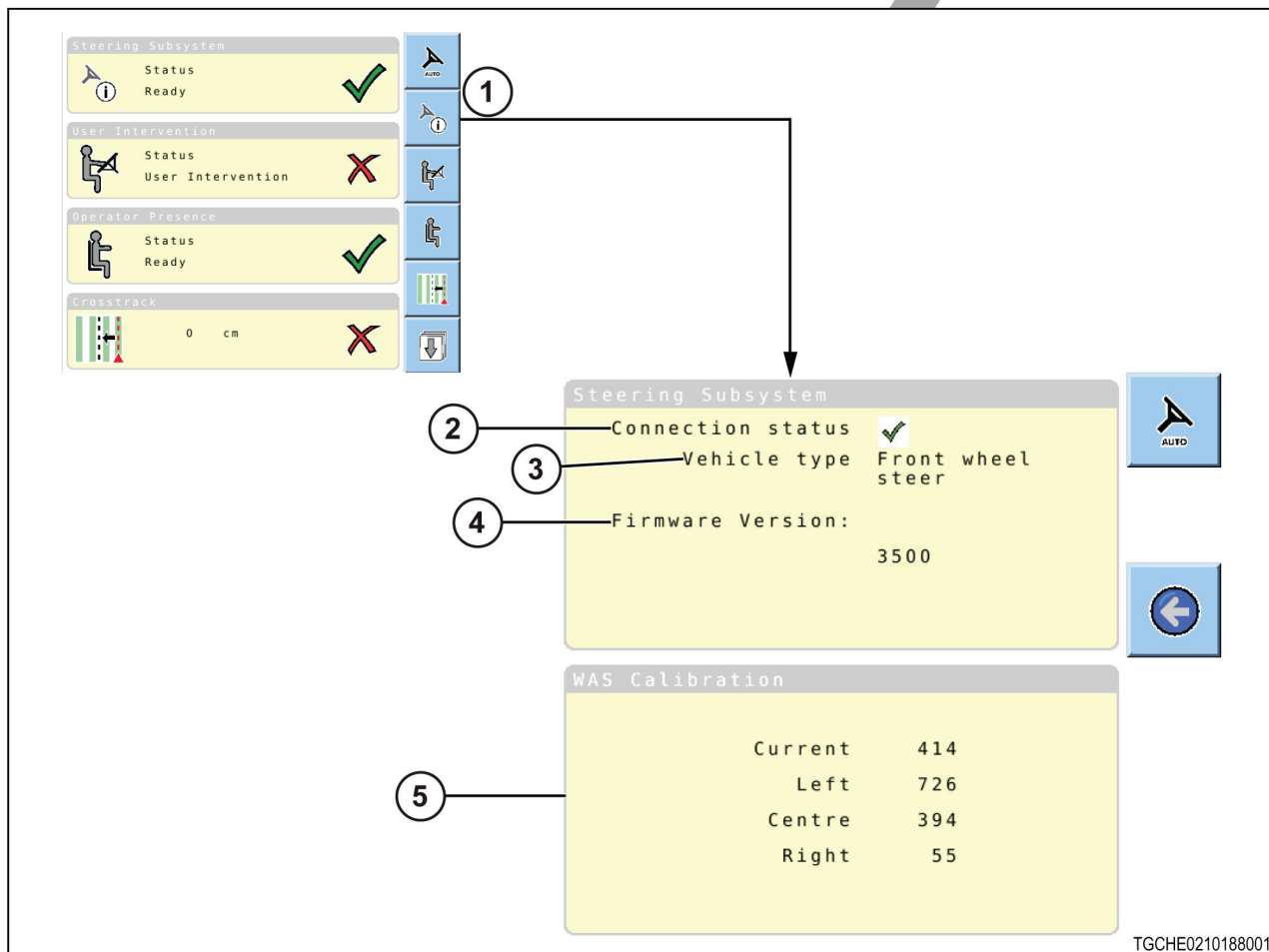





Fig. 38

Complete the steps below to see the steering subsystem status.


From the system status menu, select  (1).

The screen shows the:

- Connection status (2)
 - Connected 
 - Not connected 
- Vehicle type (3)
- firmware version (4)

If the wheel angle sensor is calibrated, these values will be shown in the WAS calibration section (5).

If the steering subsystem is not connected, follow the prompt on the terminal.

Select  to return to the previous screen.

3.6.6 Crosstrack information

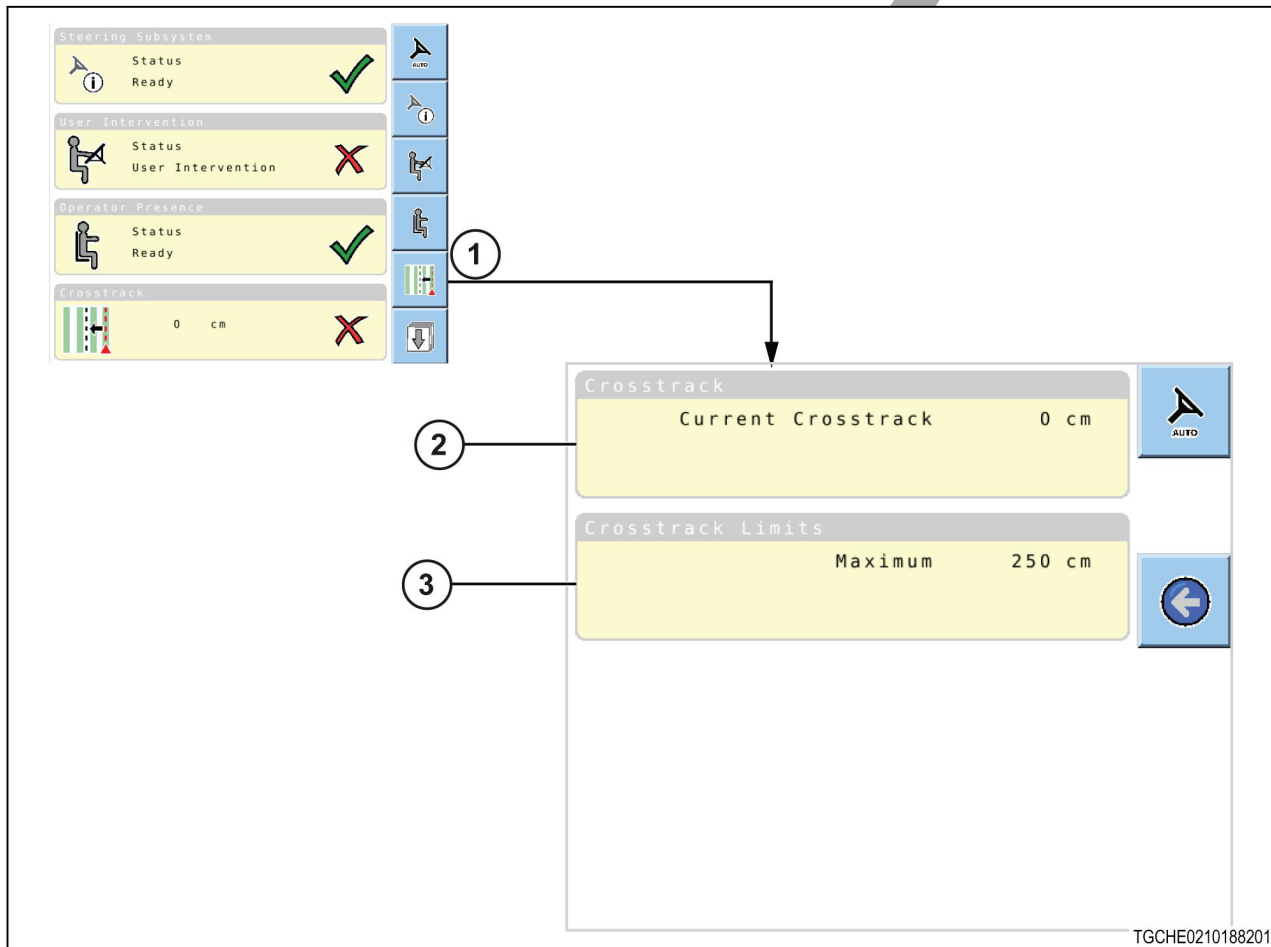




Fig. 39

From the system status screen, select  (1).

The screen shows the:

- Current position of the vehicle in relation to the wayline (2)
 - A positive value indicates that the vehicle is on to the right-hand side of the wayline.
 - A negative value indicates that the vehicle is on to the left-hand side of the wayline.
 - A 0 value indicated the vehicle is directly on the wayline.
- Maximum distance permitted from the wayline (3)
 - The maximum limit is 5 m (16 ft 5 in)..
 - The automatic steering cannot be engaged if the machine is farther away from the wayline than this value.

Select  to return to the previous screen.

3.6.7 Angle to wayline information

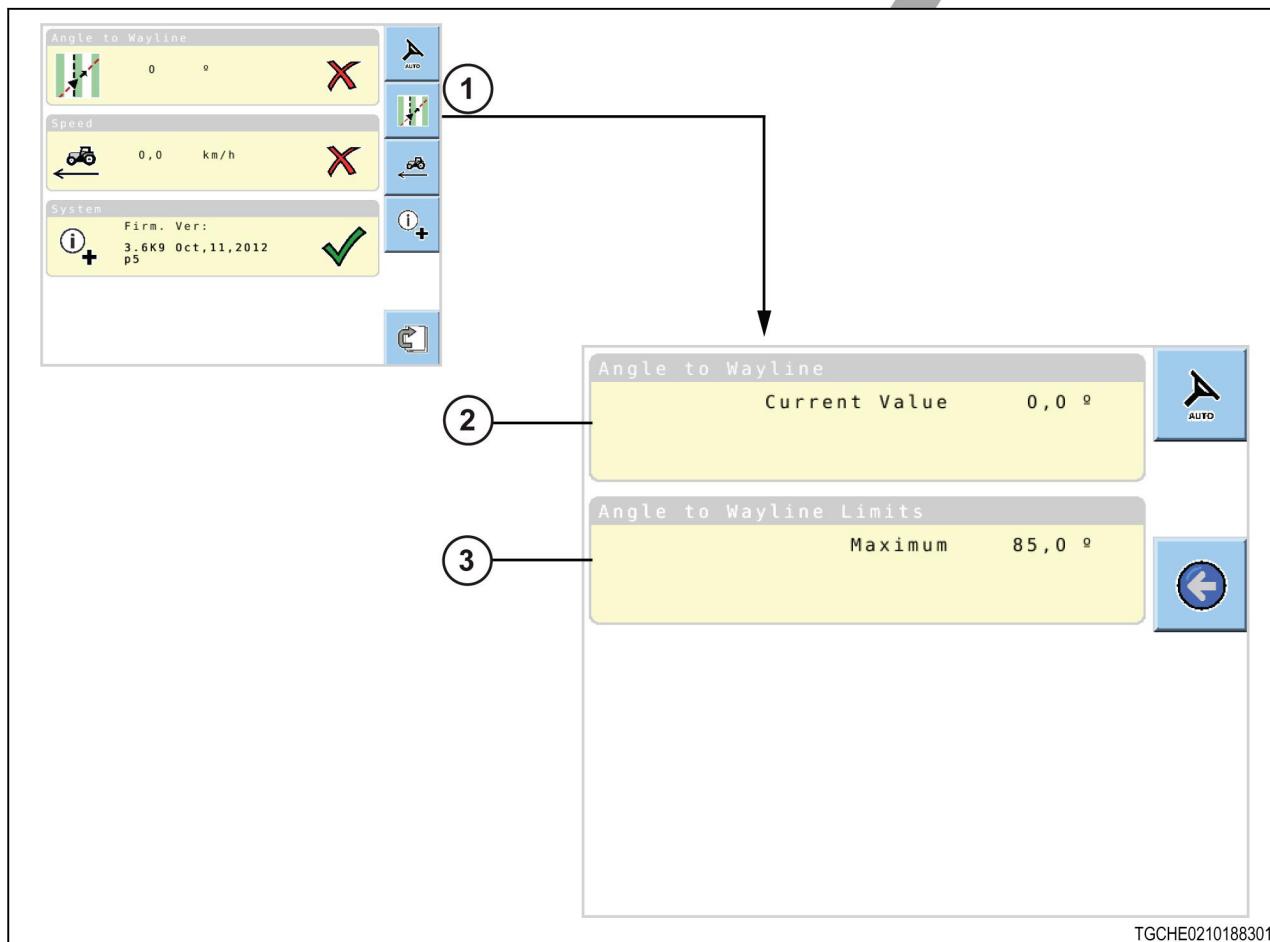



Fig. 40


From the system status menu, select  (1).

Information on this screen:

- Current angle value (2). A 0.0° value indicates the vehicle is parallel to the wayline.
- Maximum angle limit value (3)

Angle to wayline refers to the angle of the vehicle in relation to the wayline.

If the angle to wayline is more than 85° the automatic steering will not engage. When the angle is too near to 90°, the system cannot determine which direction the operator intends to turn on to the wayline.

Select  to return to the previous screen.

3.6.8 Speed information

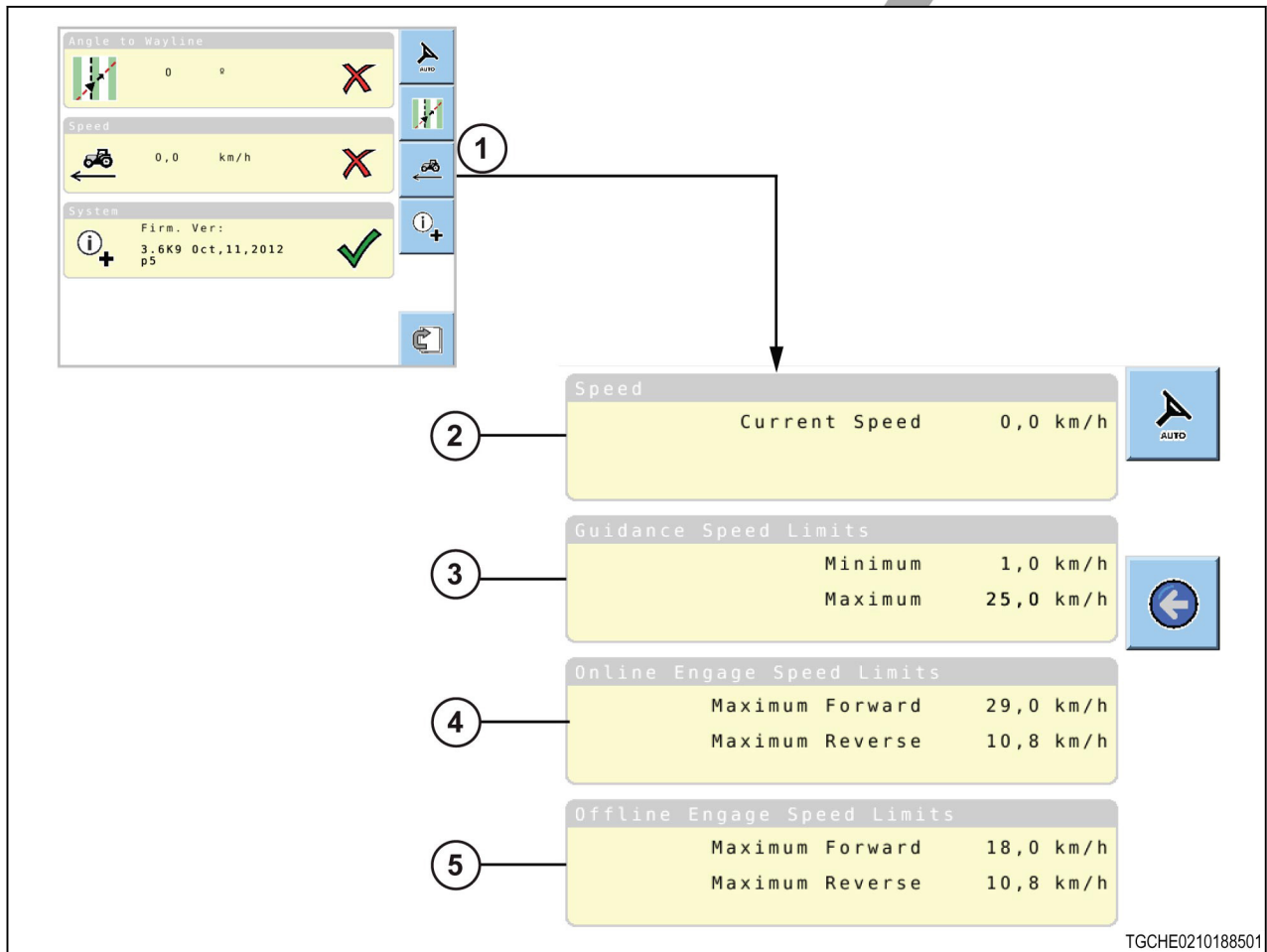



Fig. 41

From the system status screen, select  (1).

The screen shows the:

- Current speed (2) refers to the speed the vehicle is moving at this time.
- Guidance speed (3) limits refers to the minimum and maximum speed limit required to engage the automatic steering.
- Online engaged speed limits (4) refers to the maximum forward and reverse speed limits permitted when moving on the wayline.
- Offline engage speed limits (5) refers to the maximum forward and reverse speed limits permitted when moving off the wayline and trying to engage the automatic steering.

Select  to return to the previous screen.

3.6.9 System information

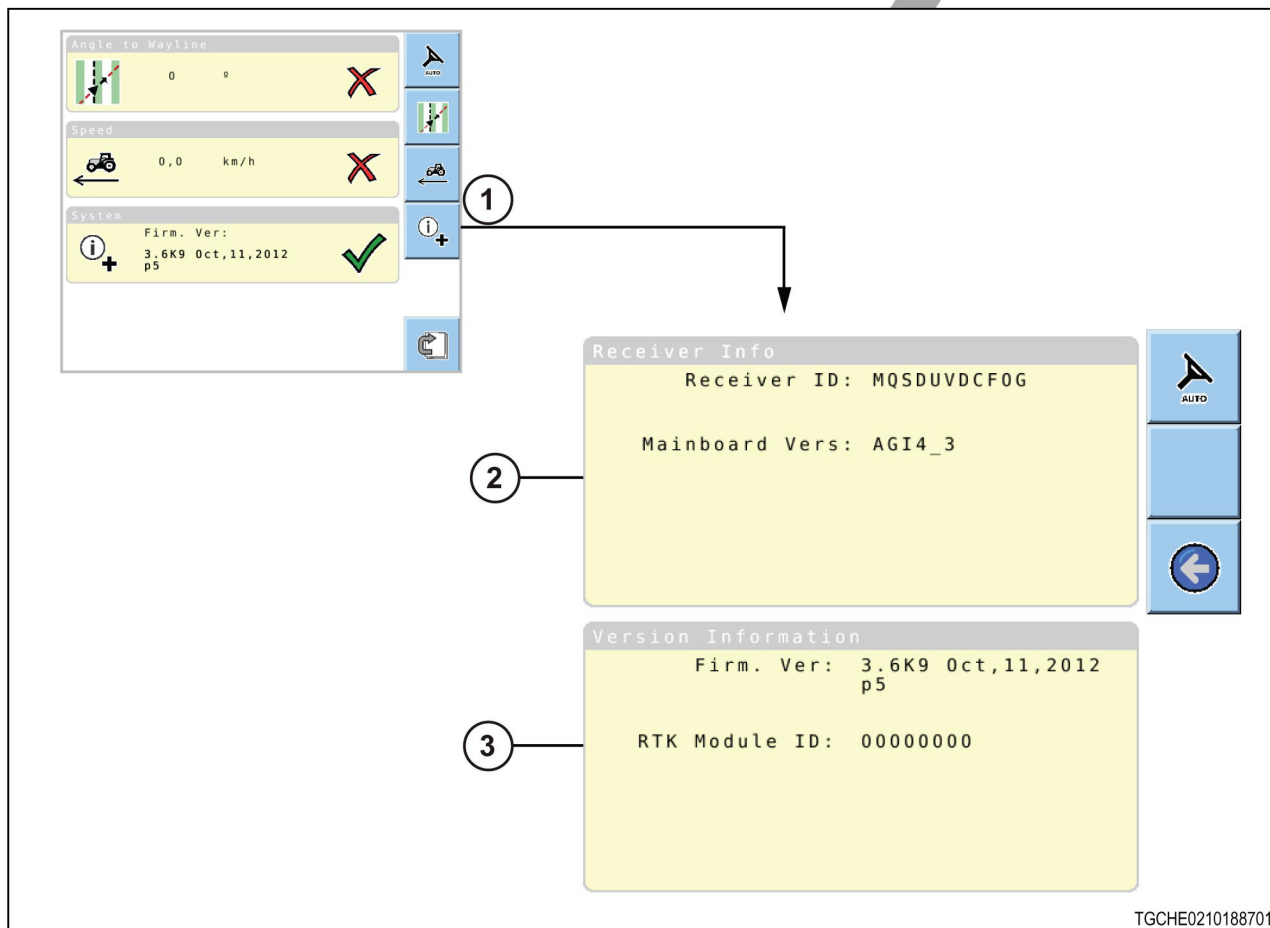




Fig. 42

From the system status menu, select  (1).

The receiver info screen is shown.

The system information includes receiver information (2) and software version information (3).

Select  to return to the previous screen.

3.7 Waylines

A wayline defines the line of travel the machine will follow.


There are four types of waylines:

- AB wayline
- A+ heading
- Contour
- Pivot

There are two ways to reach the wayline menu:

- From the main guidance screen
- From the system setup menu

From the main guidance screen

1. From the main guidance screen, select  (1).

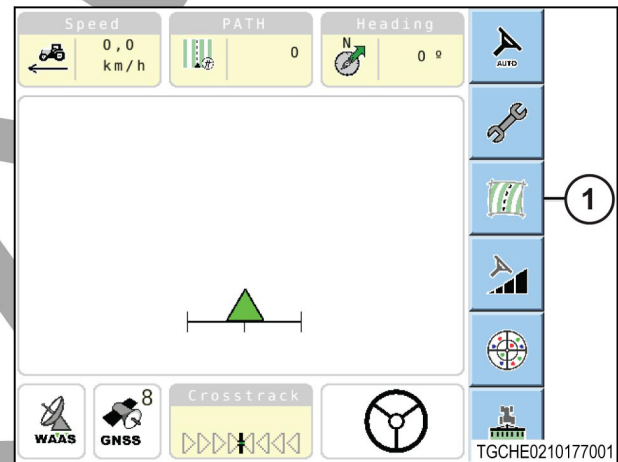
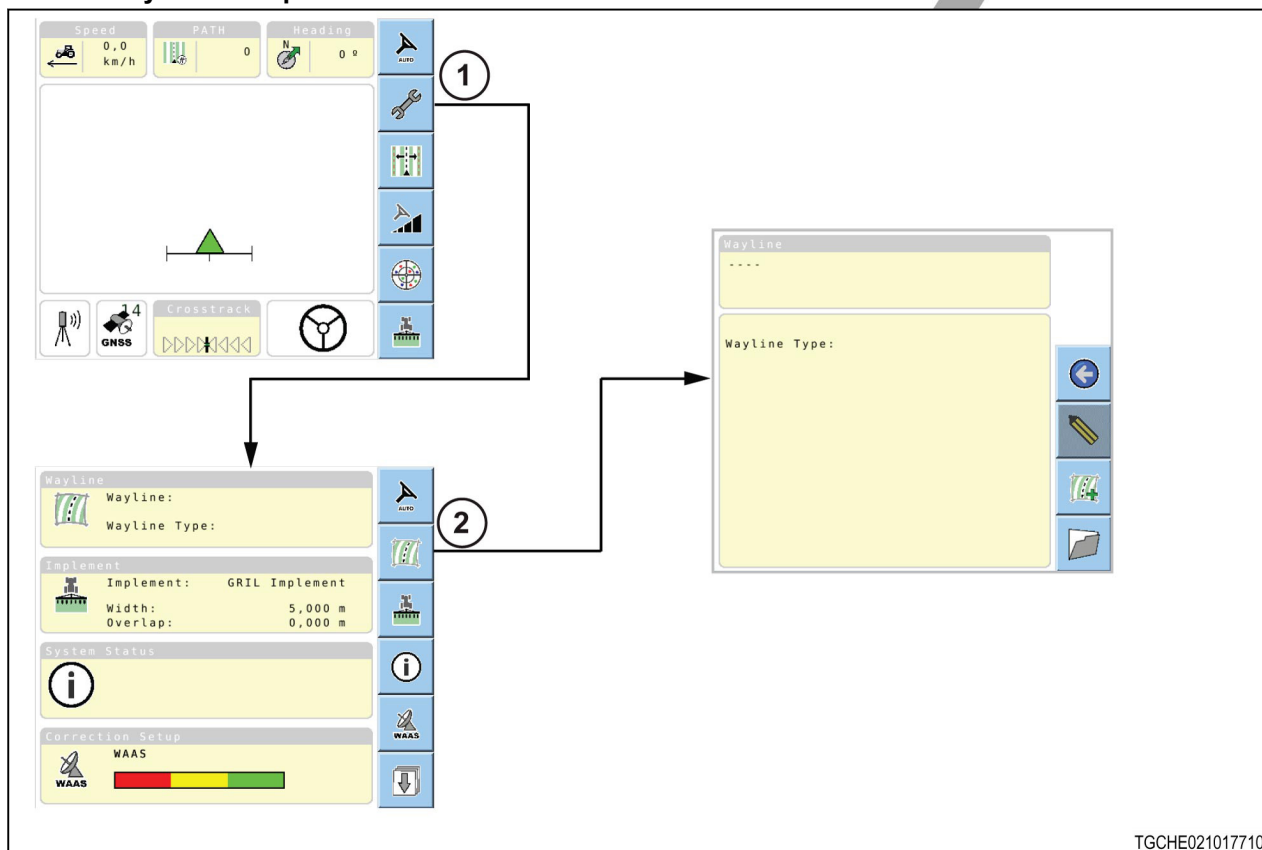


Fig. 43

From the system setup menu



TGCHE0210177101

Fig. 44

1. Select (1).
2. Select (2).

3.7.1 Making a new wayline

1. Select (1).
 - a) Changing the name of the wayline is optional. Select the wayline name box to change the name.
2. Select (2).
3. Select the desired wayline icon (3) and follow the prompts. See the information for making each type of wayline.

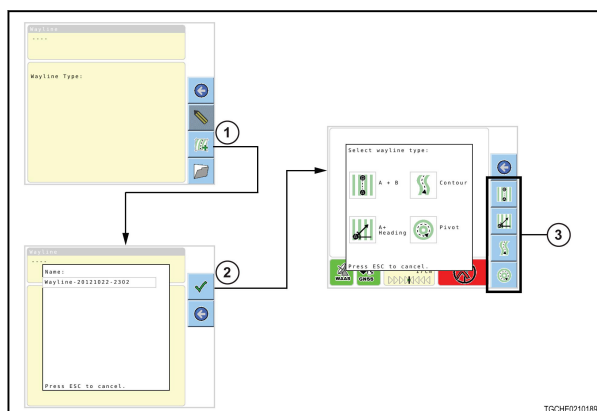


Fig. 45

TGCHE0210189001

make graphic pagewide

3.7.2 AB wayline

AB wayline

An AB wayline (1) is made by setting a start point A (2), moving on a straight line for a minimum of 10 m (32.8 ft) before setting the end point B (3). The AB wayline can be used in operations where the lines are relatively straight.

When an AB wayline is made, an infinite number of parallel waylines (4) can be shown on either side of the original wayline. The spacing between each of the waylines (5) is determined by the width of the implement.

Wayline extensions (6) can be made at the ends of the original wayline that continue to the edge of the field boundary.

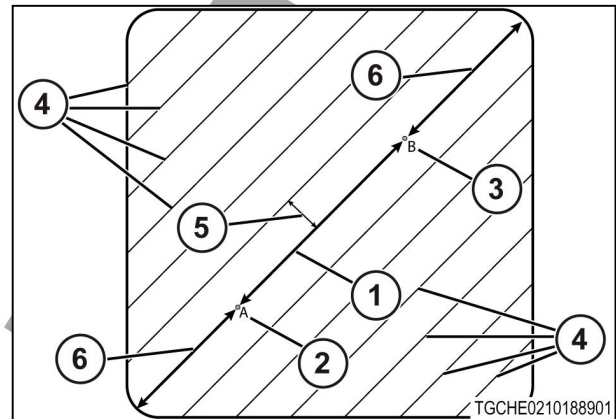


Fig. 46

Making an AB wayline

Make and name the wayline before selecting the type of wayline.

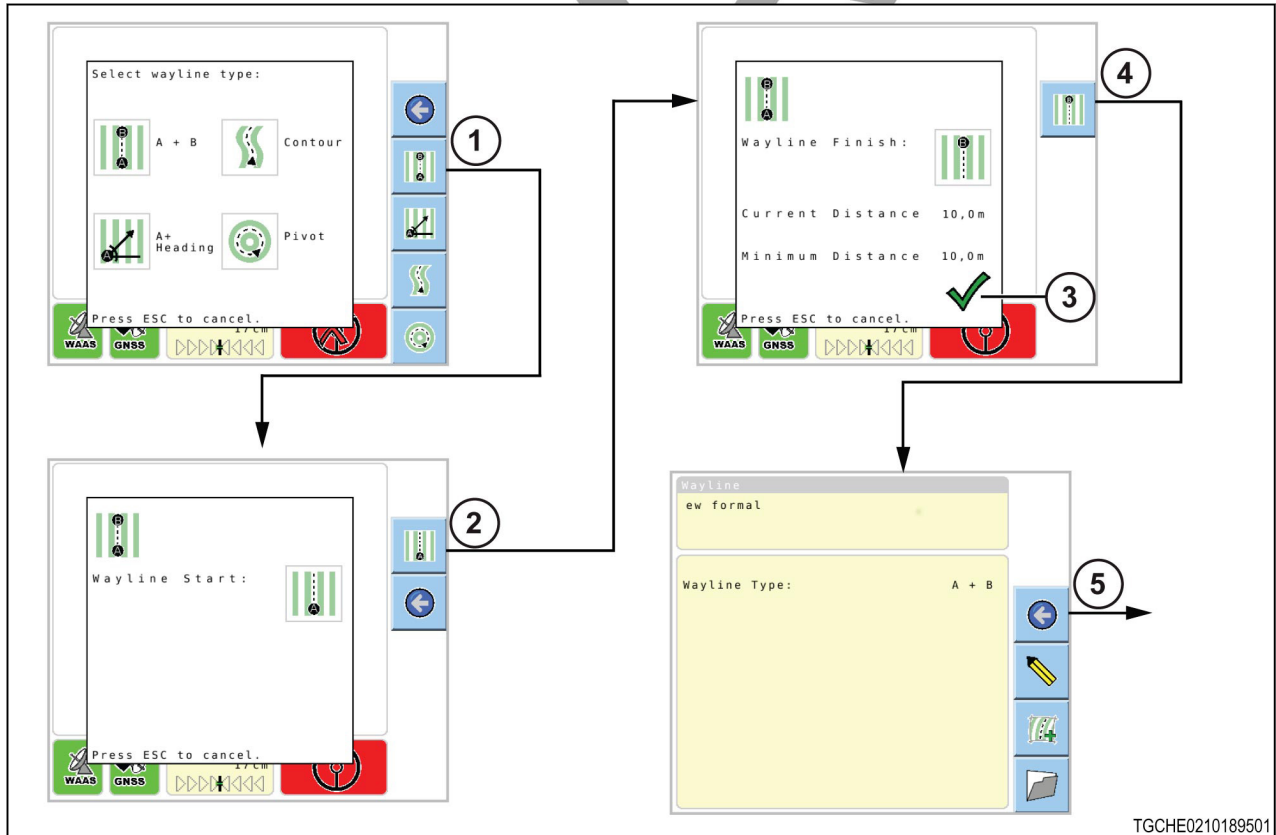







Fig. 47

1.  Select (1).
Enter the result of your step here (optional).
2. Select  (2) to set the beginning point of the wayline.
3. Drive the vehicle in the desired direction a minimum of 10 m (32.8 ft).

- A  (3) will show on the screen when the vehicle has moved the minimum distance.
4. Select  (4) to set the end point of the wayline.
5. Select  (5) to keep the AB wayline and return to the system setup menu.

3.7.3 A+ heading line

An A+ heading line (1) is made by setting a start point (2) and entering a value for the heading (3). The heading is the direction the vehicle will move from the start point.

Heading values:

- Directly north - 0°
- Directly east - 90°
- Directly south - 180°
- Directly west - 270°

When an A+ heading line is made, an infinite number of parallel waylines (4) can be shown on either side of the original wayline. The spacing between each of the waylines (5) is determined by the width of the implement.

Wayline extensions (6) can be made at the ends of the original wayline that continue to the edge of the field boundary.

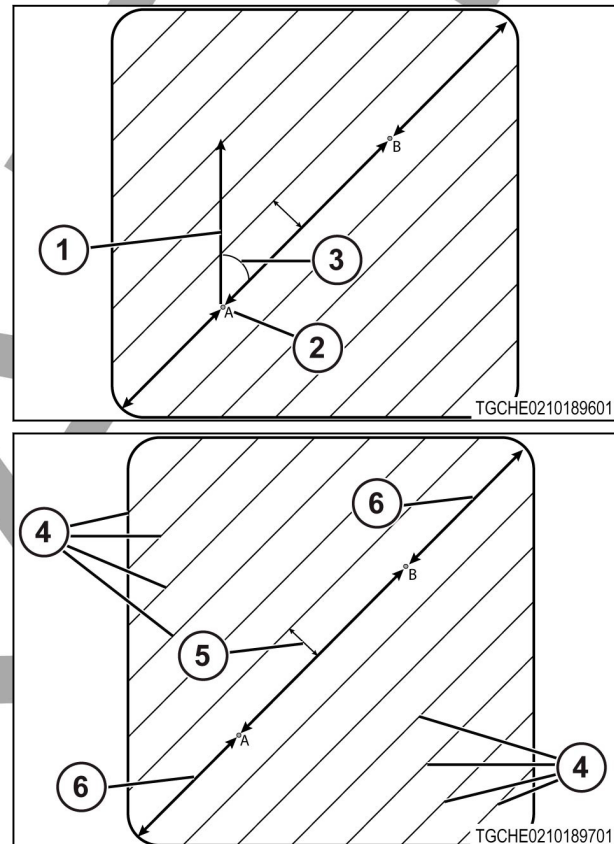


Fig. 48

Making an A+ heading line

Make and name the wayline before selecting the type of wayline.

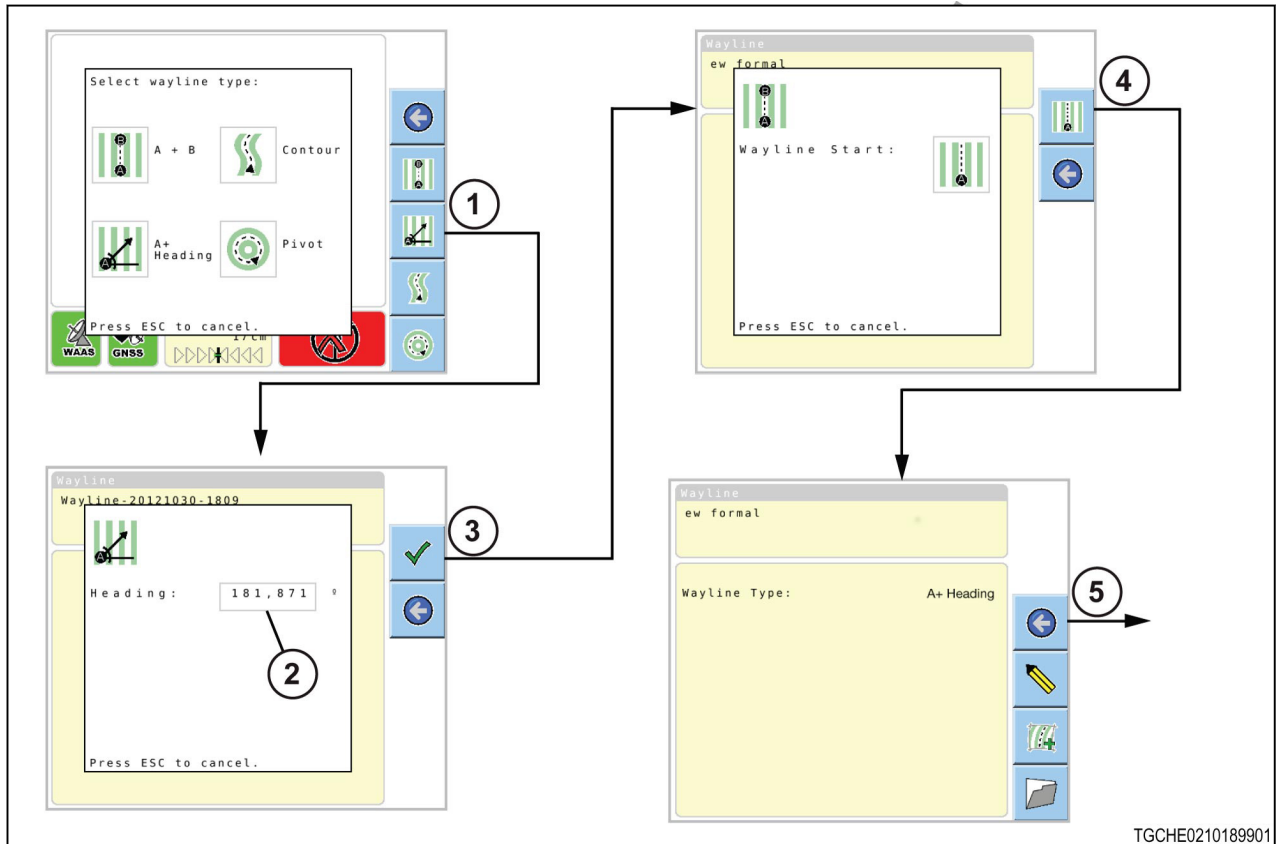






Fig. 49

1. Select  (1).
Enter the result of your step here (optional).
2. Enter the degrees (2) in relation to north that the vehicle will be moving.
The heading defaults to the direction is degrees that the vehicle is pointing.
3. Select  (3).
4. Select  (4) to set the beginning point of the wayline.
5. Select  (5) to keep the A+ heading line and return to the system setup menu.

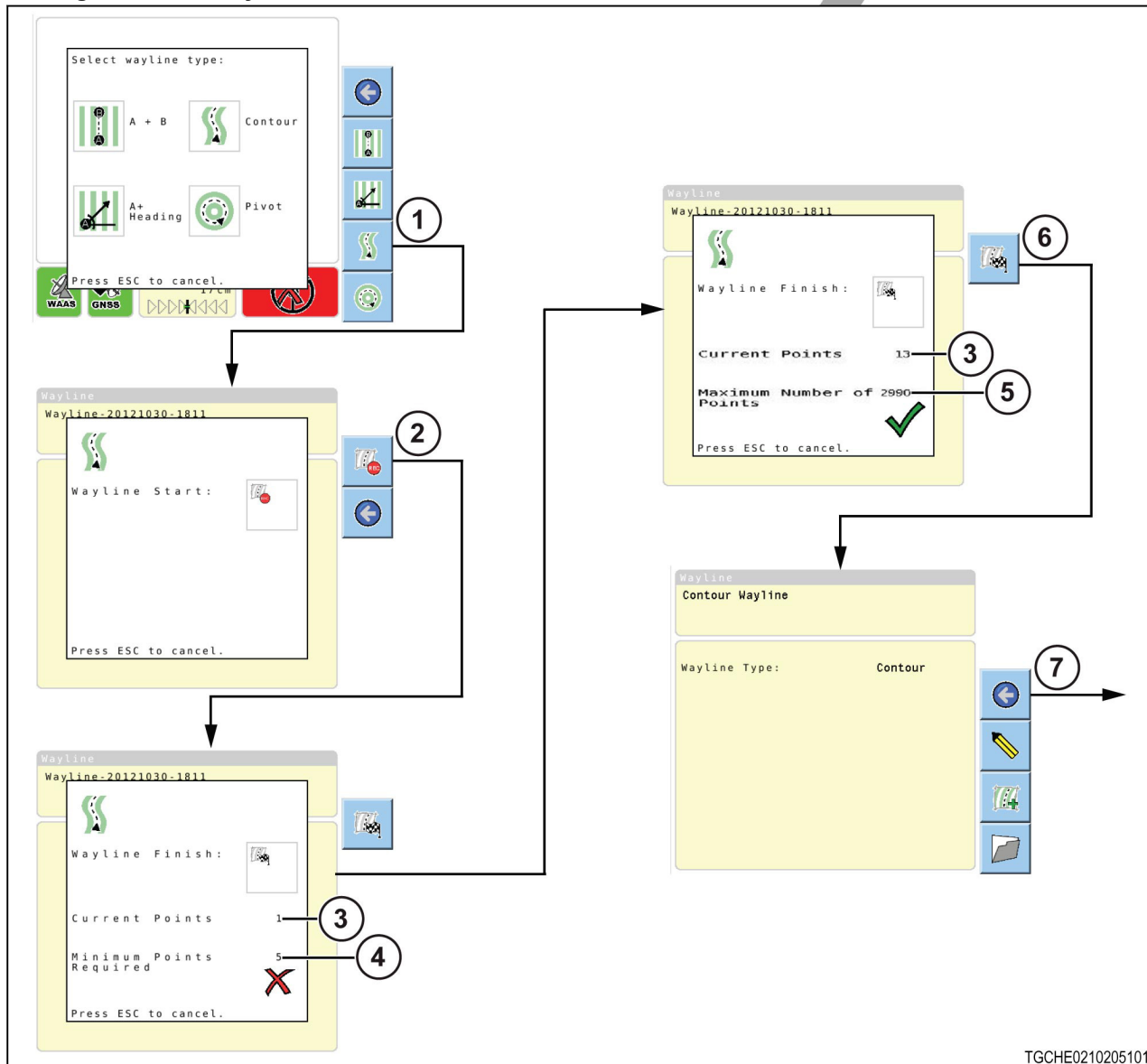
3.7.4 Contour wayline

A contour wayline is similar to an AB wayline, but the path moves along a curved line. A contour wayline can be used if the field shape does not permit the use of straight waylines.

When an AB wayline is made, an infinite number of parallel waylines (4) can be shown on either side of the original wayline. The spacing between each of the waylines (5) is determined by the width of the implement.





Wayline extensions (6) can be made at the ends of the original wayline that continue to the edge of the field boundary.

Making a contour wayline



TGCHE0210205101

Fig. 50

1. Select  (1).
2. Select  (2).
3. Drive along the desired route.
When moving along the route, the system records the points of the line. The current points field (3) automatically changes to show the number of points records. There is a minimum number of points required (4). When there are more than the minimum number of points, the maximum number of points (5) shows.
4. Select  (6) at the end of the contour wayline.
5. Select  (7) to return to the setup screen.

3.7.5 Pivot wayline

A pivot wayline (1) is used in fields that have central pivot irrigation. A pivot wayline makes a circular wayline.

A start point (2) must be set before driving around the circumference of the desired line made by the central pivot. A quarter of the pivot must be driven to make sure the wayline is created accurately before setting the end point (3).

When a pivot wayline is made, additional waylines (4) can be shown on either side of the original wayline. The spacing between each of the waylines (5) is determined by the width of the implement.

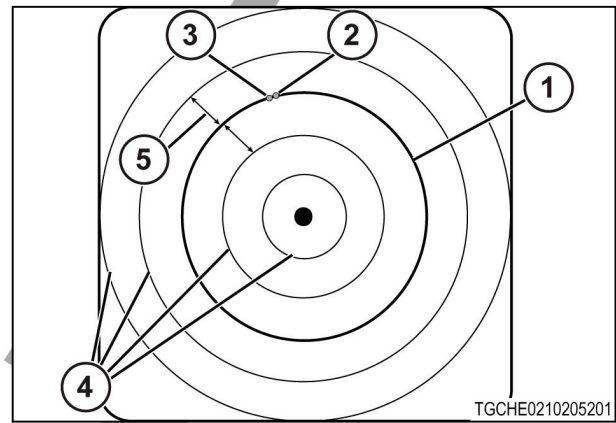
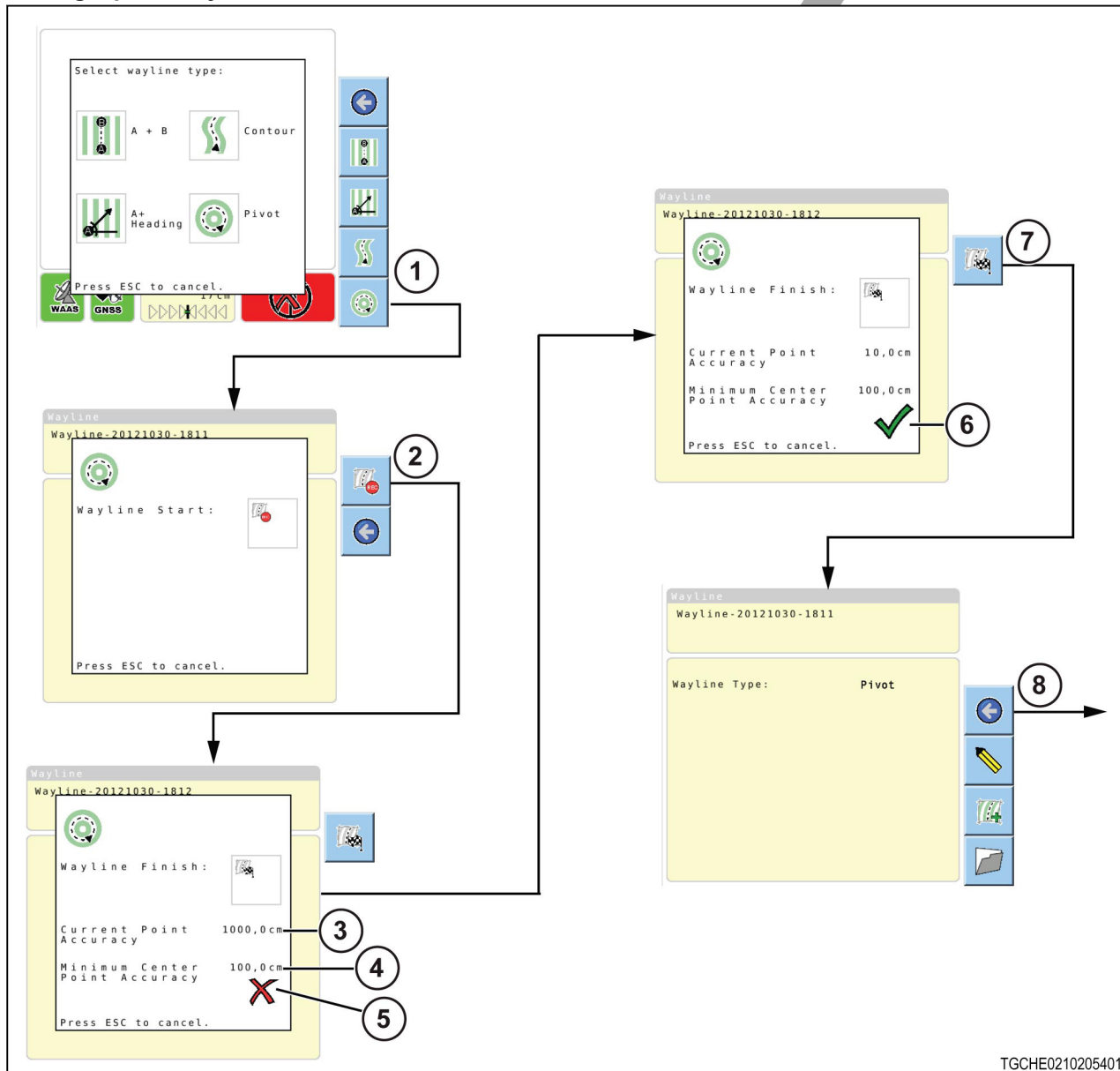








Fig. 51

Making a pivot wayline



TGCHE0210205401

Fig. 52

1. Select  (1).
2. Select  (2).
3. Drive along the desired route.
The current point accuracy (3) must be equal to or less than the minimum center point accuracy (4).
When the current point accuracy reaches the required minimum, the  (5) will change to a  (6).
4. Select  (7) at the end of the contour wayline.
5. Select  (8) to return to the setup screen.

3.8 Nudge and GPS drift compensation

3.8.1 GPS drift

Global positioning system (GPS) drift is the condition where the positional information that is obtained from the GPS satellites moves over time. The drift can be caused by the changing of the satellite constellation patterns used by the TopDock to get the positional information. As a result, there can be a difference between the actual wayline and the position of the wayline shown on the guidance screen.

The lower the accuracy of the correction source, the more the positional information will move over time. The higher accuracy correction sources are still subject to GPS drift, but to a smaller degree.

The GPS drift compensation and manual nudge features are available in both the basic and the advanced guidance modes.

3.8.2 Manual nudge offset

The manual nudge offset is used to move the wayline over an obstacle such as an irrigation channel, road, or fence.

To use the manual nudge offset, the vehicle must be on the wayline that will have the manual nudge offset.

Curved and straight waylines (1) will move to the left (2) or right (3) after entering a manual nudge offset value (3).

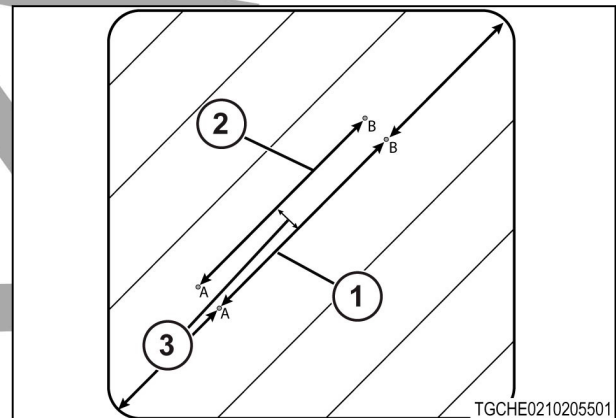


Fig. 53

The pivot wayline (1) diameter will increase (2) or decrease after entering a manual nudge offset value (3). The center of the pivot (4) will not change.

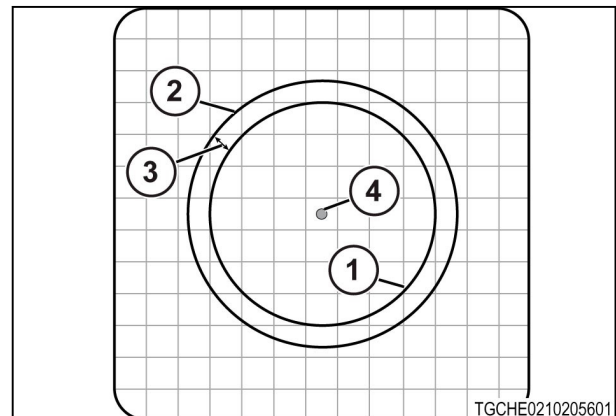


Fig. 54

Creating a manual nudge offset

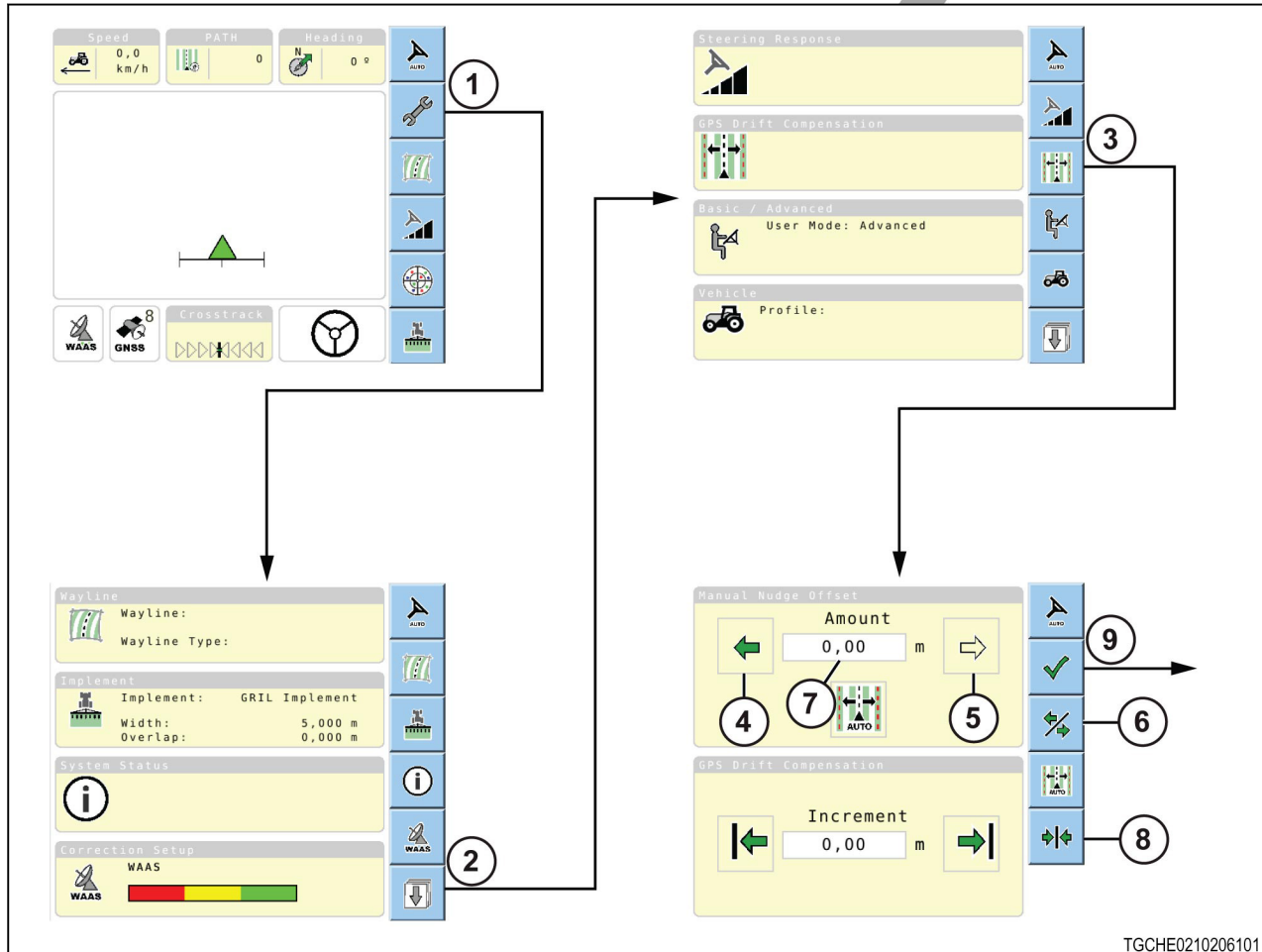









Fig. 55

1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Select  (4) or  (5) as necessary to set the direction of the manual nudge offset.
5. Enter the manual nudge offset value (7)
6. Select  (6) to move between the arrows. The arrows will turn green when selected.
7. Select  (9) to save and return to the setup menu.

3.8.3 Automatic nudge offset

Automatic nudge offset compensates for global positioning system (GPS) drift for less accurate correction sources.

To use the automatic nudge offset, the vehicle must be on the wayline that will have the automatic nudge offset.

Curved and straight waylines (1) will move to the left (2) or right (3) after adding an automatic nudge offset value (3).

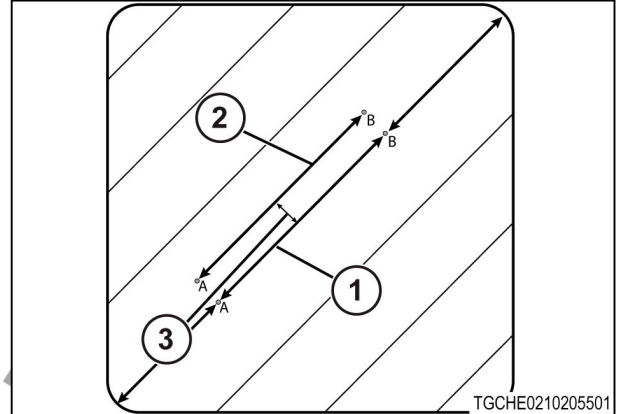


Fig. 56

The pivot wayline (1) diameter will increase (2) or decrease after adding an automatic nudge offset value (3). The center of the pivot (4) will not change.

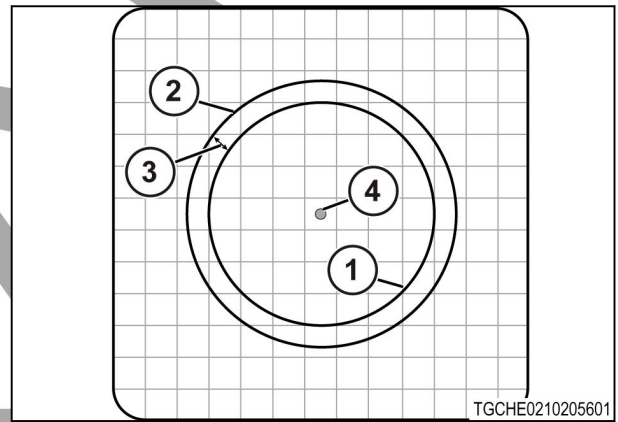


Fig. 57

Creating an automatic nudge offset

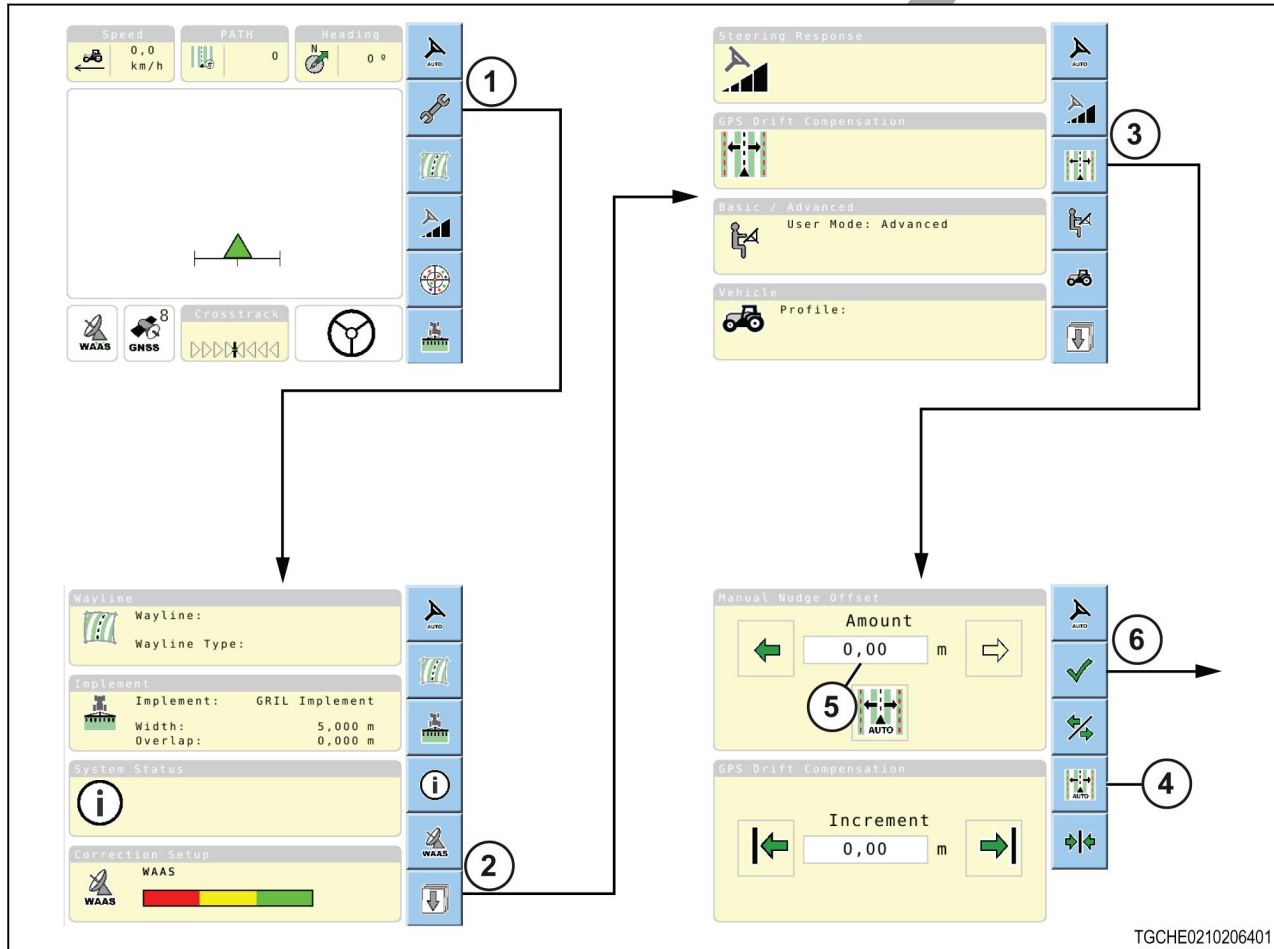







Fig. 58

1. Select  (1).
2. Select  (2).
3. Select  (3).
4. Select  (4).
5. A message screen will show. Follow the prompt.
6. The amount (5) will change with the automatic nudge offset value.
7. Select  (6) to save and return to the setup menu.

3.8.4 GPS drift compensation

Global positioning system (GPS) drift compensation lets adjustments be made by making a nudge amount value and using the nudge amount while using automatic steering.

Straight waylines (1) will move the left (2) or right after entering the nudge increment value (3).

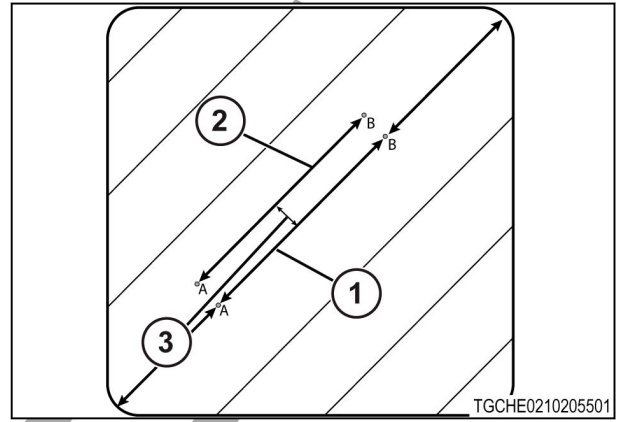


Fig. 59

Curved waylines (1) will move (2) after entering the nudge increment value.

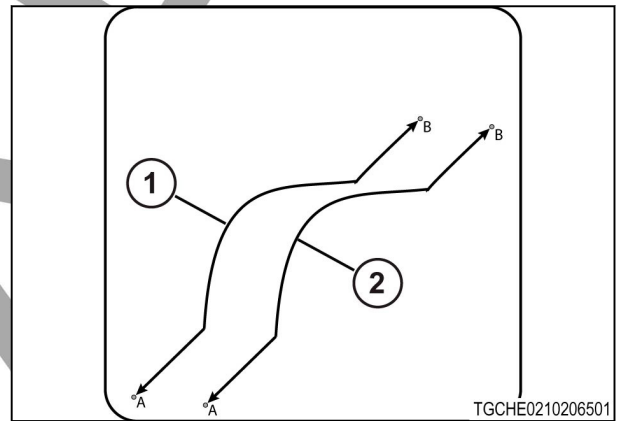


Fig. 60

Pivot waylines (1) will move (2) after entering a nudge increment value. The center of the pivot (3) is moved (4), but the diameter of the wayline does not change.

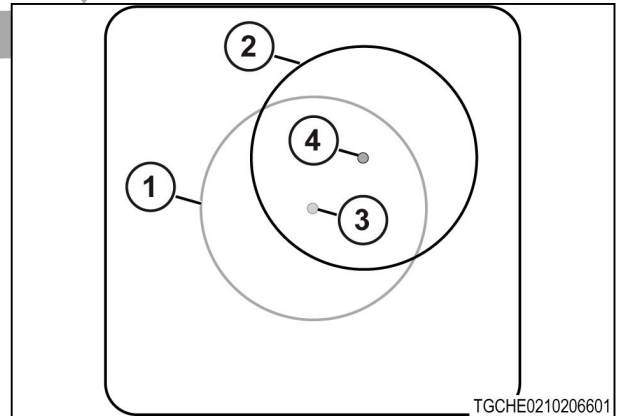


Fig. 61

Making a GPS drft compensation

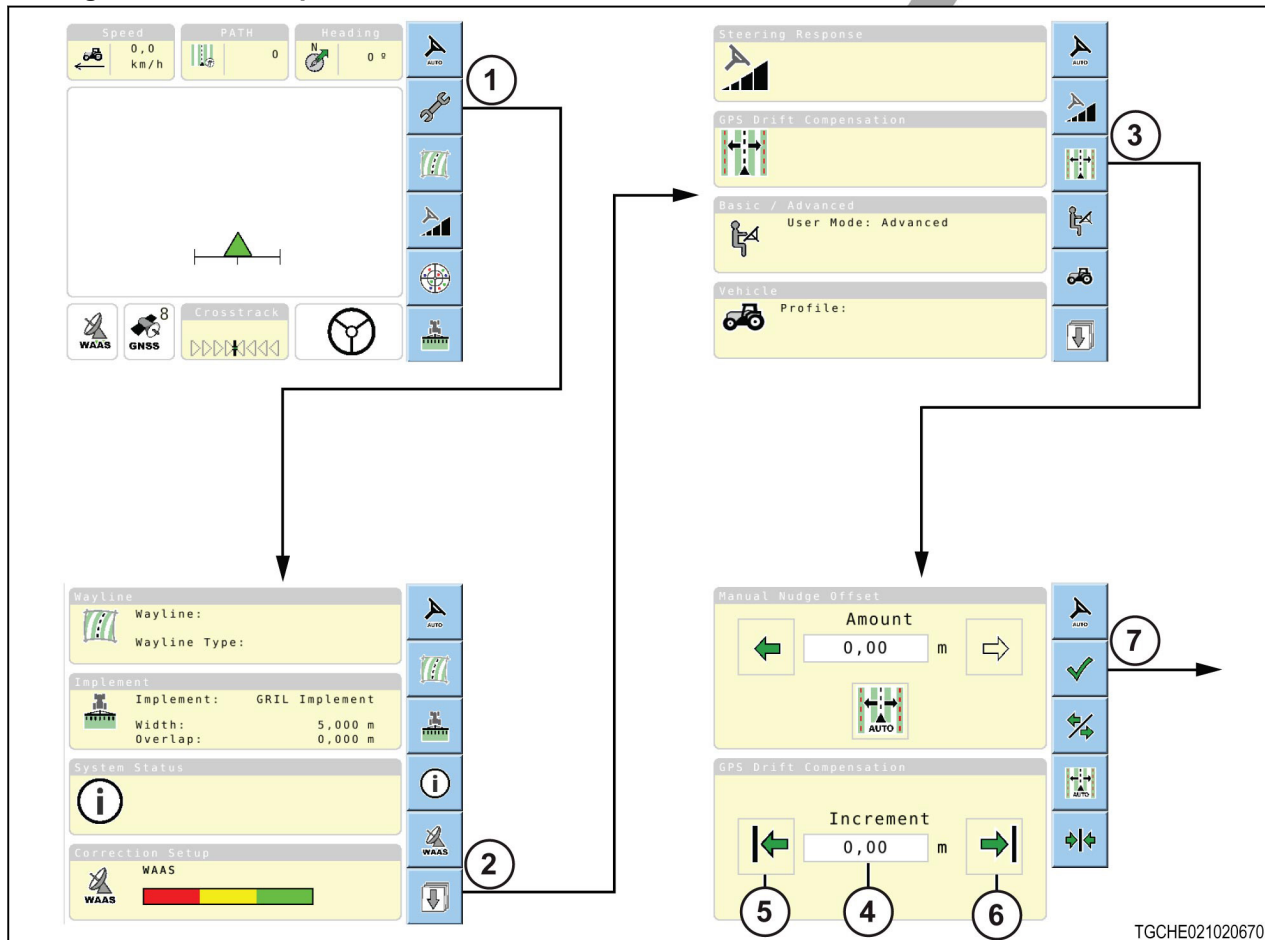








Fig. 62

1. Select  (1).
 2. Select  (2).
 3. Select  (3).
 4. In the GPS drift compensation box, enter the nudge amount in the increment box (4).
 5. Select  (5) or  (6) to set the increment.
 6. Message screens can show.
 7. Select  (7) to save and return to the setup menu.
- The nudge icons will show on the main guidance screen for use while using automatic steering.

3.9 Automatic steering

3.9.1 Setting the steering response

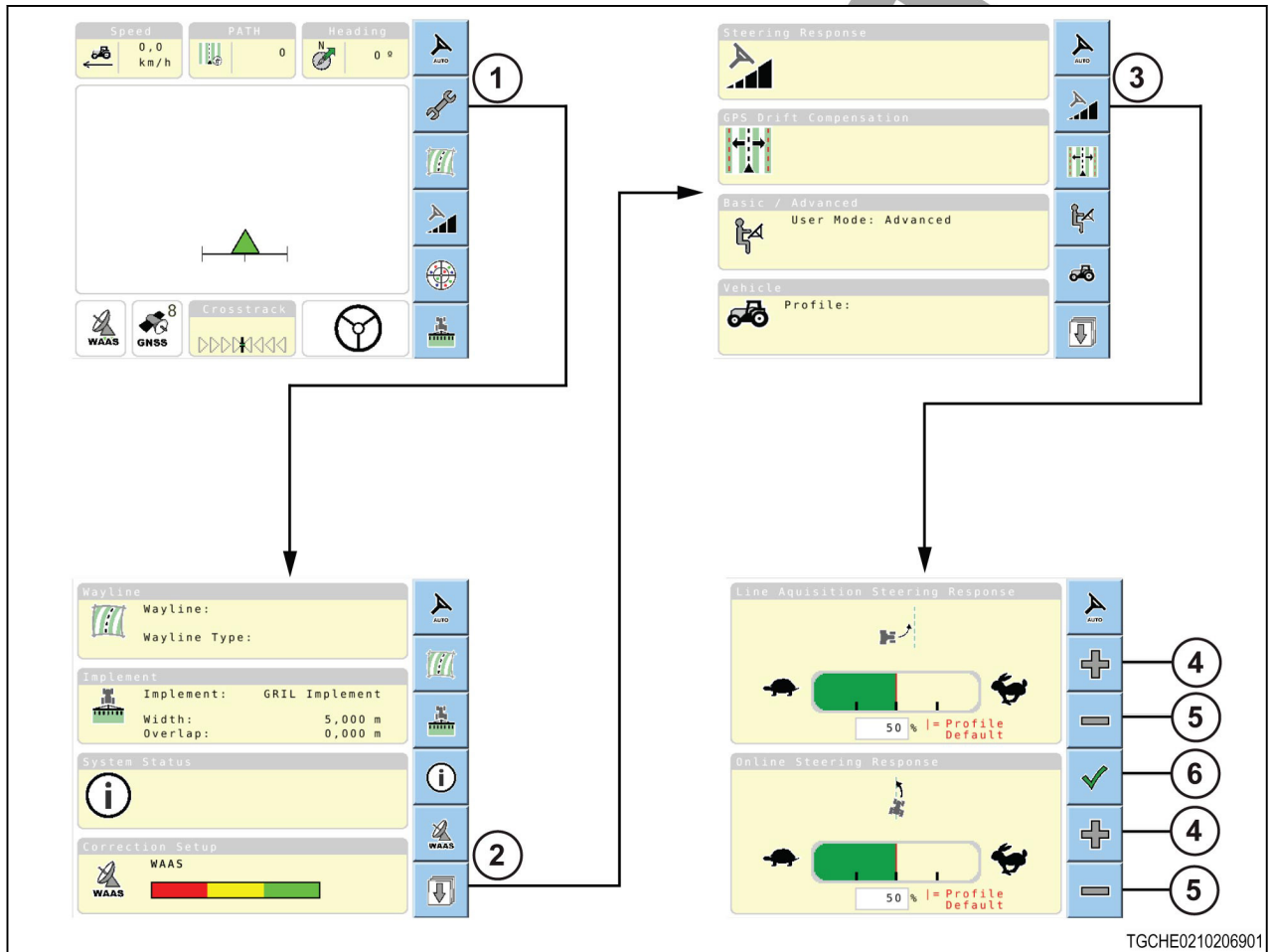








Fig. 63

1. Select  (1).
2. Select  (2).
3. Select  (3)
4. To increase the line acquisition or online steering response, select  (4).
The steering response values change in intervals of five percent.
5. To decrease the line acquisition or online steering response, select  (5).
6. Select  (6) to save and return to the setup menu.

Test the steering response and repeat the procedure until the steering response is correct.

3.9.2 Steering response

The terminal lets line acquisition and online steering response be changed.

Many things contribute to the steering performance of a machine - the machine, the implement used and the ground conditions. Line acquisition and online steering response let an operator get the desired steering behavior from the system. Keep in mind, there are no set values that work for all given conditions.

Line acquisition steering response

The line acquisition steering response determines how aggressively the vehicle moves on to the wayline when engaging the automatic steering.

The amount of aggressiveness is determined by the implement being used and the operating speed.

The higher the line acquisition steering response, the more suddenly the vehicle will move on to the wayline. If the vehicle is operating at a higher speed, set the line acquisition steering response lower to prevent accidents.

Online steering response

Online steering response sets how accurately the vehicle stays on the wayline.

The higher the online steering response, the more accurately the vehicle will following the wayline.

When the online steering response is set correctly, the vehicle will follow the wayline without the wheels oscillating. If the vehicle is operating at a higher speed, the online steering response must be set lower.

Online steering response is available when the vehicle is 0 to 100 cm (0 to 39.4 in) from a wayline.

3.9.3 Automatic steering

To engage automatic steering:

- There must be no factors that will keep automatic steering from engaging
- A wayline must be selected
- The vehicle must be close to the selected wayline and at an angle that will let the vehicle move smoothly to the wayline
- The vehicle must be operating at an appropriate speed

Select **steering icon** (1) to engage automatic steering.

To disengage the automatic steering:

- Manually turn the steering wheel, or
- Select **steering icon** while automatic steering is engaged.

Automatic steering will disengage automatically is the vehicle speed is not within the values for online steering.

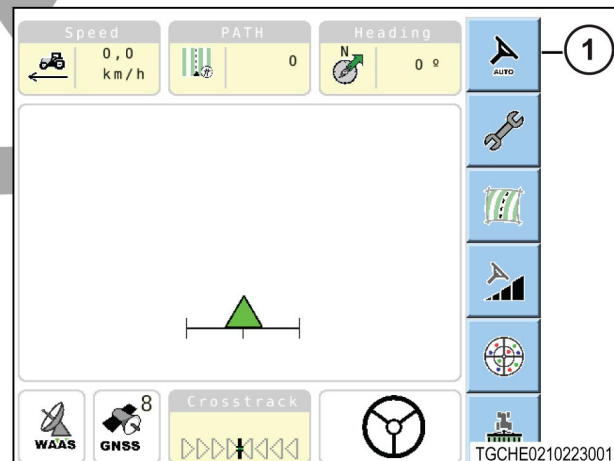


Fig. 64

4. Troubleshooting

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4.2 Error codes	4-11

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4.1 System troubleshooting

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Problem	Correction
When starting the system, the loading screen is not shown	Make sure the receiver cable is connected and the receiver power is on.
	If the problem continues, see your dealer.
When starting the system, the system stops at the loading screen	This problem indicates a TopDock/terminal firmware mismatch. This problem occurs when an older version of TopDock firmware is loaded in the new terminal.
	The system cannot be used. See your dealer or the manufacturer for a firmware upgrade.
Automatic steering will not engage	The system status screens will isolate specific problems preventing the automatic steering from operating. When the problem has been isolated, use the steps below for troubleshooting the problem. See the information for checking the system status.
	If position accuracy is in error:

Problem	Correction
	<ul style="list-style-type: none"> • Make sure there are enough global navigation satellite system (GNSS) satellites in use. See the information for GNSS coverage and for GNSS information. If there is not enough satellite coverage, check for obstructions. Make sure the vehicle is parked in an open area away from any objects that can be an obstruction to a satellite signal. If necessary, wait until enough satellites are found. • Make sure the correct correction source is selected. • If OmniSTAR is being used, make sure the subscription is up to date. If necessary, renew the subscription. Also, make sure the frequency selected is correct for the region where the vehicle is located. See the information for the correction setup.

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Problem	Correction
	<ul style="list-style-type: none"> • If OmniSTAR is being used, and the vehicle has been moved since the last positions were saved, wait enough time (up to 30 minutes) for convergence. If the system has not had enough time, the position of the machine will not be accurate. In this case, turn the system off, then on again. Select # when OmniSTAR convergence message is shown, the wait until convergence has completed. • If the problem continues, see your dealer.
	<p>If the heading is an error:</p> <ul style="list-style-type: none"> • If the compass is being used, calibrate the compass. See the information for Calibrating the compass. • If the compass is being used, calibrate the compass. See the information for Calibrating the compass.

Problem	Correction
	<ul style="list-style-type: none"> If the compass is not being used, use the direction reset button on the guidance screen to reset the direction. See the information for enabling and disabling the compass. If the problem continues, see your dealer.
	<p>If the steering subsystem is in error:</p> <ul style="list-style-type: none"> Make sure the steering subsystem is on. If the steering subsystem is in the fault mode, the error message U1054 will be shown. See message code: U1054 for information on troubleshooting the problem. Make sure the steering system subsystem cable is connected to the wheel angle sensor (WAS) and the WAS has been calibrated. If necessary, reboot and calibrate the WAS. See the information for Calibrating the WAS. If the problem continues, see your dealer.

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Problem	Correction
	<p>If crosstrack is in error:</p> <ul style="list-style-type: none"> The vehicle is too far from the wayline to acquire the line. Move the vehicle closer to the wayline, then try to engage the automatic steering again. See the information for the crosstrack.
	<p>If the angle to wayline is in error:</p> <ul style="list-style-type: none"> Make sure the angle of the vehicle to the wayline is not more than 85°. Try to engage the automatic steering again. See the information for the angle to wayline.
	<p>If speed is in error:</p> <ul style="list-style-type: none"> Make sure the vehicle is moving more than 1 km/hr (1 mph) and less than the maximum guidance speed limit. The maximum guidance speed varies depending on the vehicle. See the information for viewing the speed information.

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Problem	Correction
	<p>If the system firmware version is in error:</p> <ul style="list-style-type: none"> • Make sure the firmware version is compatible with the terminal firmware. See your dealer. See the information for viewing the speed information. <p>Make and select a profile for the vehicle, the implement, and the wayline.</p>
<p>Automatic steering disengages</p>	<p>Some of the problems that prevent the automatic steering from engaging can also cause the automatic steering to keep from disengaging after being engaged. For example, a degraded GNSS signal can cause the automatic steering to disengage after being engaged.</p> <p>NOTE: <i>Automatic steering will disengage if the steering wheel is turned. Do not try to steer the vehicle manually.</i></p> <p><i>If the problem continues, see your dealer.</i></p>
<p>Steering is not accurate or is erratic</p>	<p>Make sure the vehicle profile is accurate. See the information for editing a vehicle profile.</p> <p>Make sure the position accuracy is adequate. See the information for the automatic steering will not engage for guidelines on</p>

Problem	Correction
	<p>troubleshooting this problem.</p> <p>Make sure the receiver is mounted securely. The receiver can move around if not mounted securely and can cause changes in the steering.</p> <p>Reboot the system. If the compass is enabled, calibrate the compass. Calibrate the WAS. See the information for calibrating the compass and for calibrating the WAS.</p> <p>New tires can cause changes in the steering. If different tires have been installed, calibrate the compass (if enabled). Calibrate the WAS. See the information for calibrating the compass and for calibrating the WAS.</p> <p>Inspect the WAS for damage. A damaged WAS can cause changes in steering. If necessary, have the WAS repaired.</p> <p>If the problem continues, see your dealer.</p> <p>If the steering is jumpy or erratic, check the online steering response and reset if necessary. See the information for steering response.</p> <p>If the online steering response is adjusted too low, the vehicle will move in a loose 'S'</p>


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Problem	Correction
	<p>shape along the wayline. If the online steering response is adjusted too high, the vehicle will move in a tight 'S' shape along the wayline.</p> <p>If the problem continues, see your dealer.</p>

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4.2 Error codes

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Message code	Problem	Correction
M0001	 <p>WARNING The system is too warm. Too much heat can cause a reduction in the system operation.</p>	<p>If the system is operating correctly, close the error code message and continue.</p> <p>If the system is not operating correctly, shut down the system. Move the vehicle to an area out of direct sunlight. Let the TopDock become cool before starting the system again.</p>
M0006	Internal hardware failure.	<p>If the system still operates, close the error code message and continue operating.</p> <p>If the system will not operate, see your dealer.</p>
M10007	Internal hardware failure.	See M0006.
M10010	The internal memory is full. Some operations will be disabled.	<p>Delete any wayline, implement, or vehicle profiles that are not required.</p> <p>See the information for deleting a vehicle profile.</p> <p>See the information for deleting a vehicle profile.</p> <p>See the information for deleting a wayline.</p> <p>If the problem continues, see your dealer.</p>

Message code	Problem	Correction
M0100	The internal inertial sensor is out of the normal operating range.	<p>This error can occur when the receiver is moved from the vehicle.</p> <p>Calibrate the compass and continue operations.</p> <p>See the information for calibrating the compass.</p> <p>If the problem continues, see your dealer.</p>
M0101	The internal inertial sensor has no calibration data.	<p>Shut down the system and then start the system again.</p> <p>If the problem continues, see your dealer.</p> <p>Dealer note: Clear the Nonvolatile Random-Access Memory (NVRAM).</p>
M0200	The internal inertial sensor is out of the normal operating range.	See M0100.
M0201	The internal inertial sensor has no calibration data.	See M0100.
M0300	The internal inertial sensor is out of the normal operating range.	See M0100.

Message code	Problem	Correction
M0400	The internal inertial sensor is out of the normal operating range.	See M0100.
M0401	The internal inertial sensor has no calibration data.	See M0101.
M0500	The internal inertial sensor is out of the normal operating range.	See M0100.
M0501	The internal inertial sensor has no calibration data.	See M0101.
M0600	The internal inertial sensor is out of the normal operating range.	See M0100.
M0601	The internal inertial sensor has no calibration data.	See M0101.
M1100	The internal inertial sensor out of the normal operating range.	See M0100.
M1101	The internal inertial sensor has no calibration data.	See M0101.

Message code	Problem	Correction
M1200	The internal inertial sensor out of the normal operating range.	See M0100.
M1201	The internal inertial sensor has no calibration data.	See M0101.
M1300	The internal inertial sensor out of the normal operating range.	See M0100.
M1301	The internal inertial sensor has no calibration data.	See M0101.
M1400	The internal inertial sensor out of the normal operating range.	See M0100.
M1401	The inertial sensor has no calibration data.	See M0101.
M7002	The maximum contour distance is more than the maximum limit.	Make the contour wayline again, making sure not to go farther than the maximum contour distance. See the information for making a contour.
M7003	The present path [position] is more than the contour smoothing	Make the contour wayline again, making sure the maximum severity is within the limits.

Message code	Problem	Correction
	limits. Decrease the contour severity.	See the information for making a contour.
M7004	Error indication from the internal memory. Some operations will be disabled.	<p>If possible, repeat the steps until the error occurs again.</p> <p>If the error occurs again, and you cannot continue the operations, see your dealer.</p> <p>It is possible to continue operating, but operating functions can be reduced and not all changes will be recorded.</p>
M7005	Error writing to internal memory. Some operations will be disabled.	See M7004.
M7006	Wheel angle sensor calibration is required.	Calibrate the wheel angle sensor. See the information for calibrating the wheel angle sensor.
M7007	The present wayline cannot be generated. Check the operation parameters.	<p>Check the vehicle and implement profiles and adjust as necessary. See the information for:</p> <ul style="list-style-type: none"> Editing a vehicle profile. Editing an implement profile. <p>Repeat steps until the error occurs again.</p> <p>If the problem continues, see your dealer.</p>

Message code	Problem	Correction
M8001	The last position save was not recorded.	Repeat steps until the error occurs again. If the problem continues, see your dealer.
M8001	Movement was recorded while saving or restoring a position.	Make sure the TopDock is mounted securely. Repeat the steps until the error occurs again. If the problem continues, see your dealer.
M8003	The last saved position cannot be used.	Repeat steps until the error occurs again. If the problem continues, see your dealer.
M8010	The direction check failed.	This message indicates the wheel angle sensor value shown was out of the reasonable range. Make sure the wheel angle sensor has not failed or come loose. Check the wiring. Calibrate the wheel angle sensor. See the information for calibrating the wheel angle sensor. If the problem continues, see your dealer.
M8011	The maximum wheel angle value is not set correctly and cannot be set at more than the limit.	This error indicates the wheel angle sensor value is more than the selected maximum wheel angle value.

Message code	Problem	Correction
		<p>Make sure the sensor is good and has not come loose. Check the wiring.</p> <p>Calibrate the wheel angle sensor. See the information for calibrating the wheel angle sensor.</p> <p>If the problem continues, see your dealer.</p> <p>Dealer note: Check the maximum wheel angle value specified in the .INI file.</p>
U10152	The steering subsystem firmware version is not correct.	<p>See your dealer.</p> <p>Dealer note: This error can occur with PVED-CL steering subsystems when the firmware is version 1.28 or less.</p>
U1053	Steering subsystem parameters missing.	<p>Load the vehicle the vehicle profile. See the information for selecting a vehicle profile.</p> <p>Shut down the system and then start the system again.</p> <p>If the problem continues, see your dealer.</p> <p>Dealer note: This error only occurs with PVED-CL steering subsystems.</p>
U1054	Steering subsystem is in the fault mode.	<p>Shut down the system and then start the system again.</p>

Message code	Problem	Correction
		<p>If the error continues, inspect the wheel angle sensors, the cables, and the connections.</p> <p>See the vehicle manufacturer for more information.</p> <p>If the problem continues, see your dealer.</p> <p>Dealer note: This error only occurs with PVED-CL steering subsystems.</p>
U1055	The steering controller must be reset. Shut down the steering controller or the vehicle.	<p>Shut down the steering subsystem and the vehicle.</p> <p>Wait 20 seconds and then start the vehicle.</p> <p>If the problem continues, see your dealer.</p>
U1055	There is an error in the steering controller configuration.	<p>This error will only occur at the end of the wheel angle sensor calibration.</p> <p>Repeat the wheel angle sensor calibration.</p> <p>See the information for calibrating the wheel angle sensor.</p> <p>If the problem continues, see your dealer.</p>
U1061	The machine parameter settings not found in the steering subsystem.	See U1053.

Message code	Problem	Correction
U1062	The guidance system does not have a good mounting bias calibration. This can cause a problem with system performance.	<p>If the system is operating correctly, continue operation.</p> <p>If the system is not operating correctly, calibrate the mounting bias.</p> <p>See the information for the mounting bias calibration.</p> <p>If the system still does not operate correctly, see your dealer.</p>
U1065	The wheel angle sensor calibration is required.	Calibrate the wheel angle sensor. See the information for calibrating the wheel angle sensor.
U1066	The compass calibration is required.	Calibrate the compass. See the information for calibrating the compass.
U1067	The guidance system has been moved to a new vehicle since the last use. The compass must be calibrated again.	See U1066.
U1068	The vehicle profile is not the same as the steering subsystem settings.	<p>Make sure the steering subsystem is operating.</p> <p>Select the correct vehicle profile.</p> <p>See the information for selecting a vehicle profile.</p> <p>Start the steering subsystem again.</p>

Message code	Problem	Correction
		If the system is not operating correctly, see your dealer.
U1069	The Steering Angle Sensor Absolute (SASA sensor) is not configured.	See your dealer. Dealer note: The SASA sensor is not configured. The dealer must select the steering subsystem parameters.
U1070	The wheel angle sensor is not configured.	Calibrate the wheel angle sensor before continuing. See the information for calibrating the wheel angle sensor.
U2000	A software error has occurred.	Take note of the numbers in the error message and your procedures before the error message was shown. Give a report to your dealer.
U3000	The transfer is complete.	Information only. No procedure required.
U3001	The transfer failed.	This error can occur when importing or exporting a profile. Repeat the procedure that caused the problem. If the problem continues, remove and insert the SD card or USB memory device and then try again. If the transfer fails again, see the terminal manual to make sure the transfer to and from the external

Message code	Problem	Correction
		media devices is enabled. If you cannot correct the problem, see your dealer.
U4001	An internal data transfer error.	Shut down the system and then start the system again. Repeat the procedure that caused the error. If you cannot correct the problem, see your dealer for repair.
U4006	Systems calibrations have not been completed correctly.	Do the systems calibrations before starting to engage. Calibrate the wheel angle sensor. See the information for calibrating the wheel angle sensor. Then, if equipped, calibrate the compass. See the information for calibrating the compass.
U4012	The automatic steering did not engage.	Make sure all conditions for engaging are good and then engage. See the information for checking system status.
U5001	The steering subsystem was not found.	Make sure the steering subsystem is turned on. If equipped, make sure the roading lock out switch is in the off position.

Message code	Problem	Correction
		<p>NOTE: <i>The roading lockout switch permits safe use of the vehicle on roads. The roading lockout switch is located in the cab.</i></p>
U5002	<p>The implement and the wayline profiles are not selected or have not been made. The implement and the wayline profiles must be selected before the system can be engaged.</p>	<p>Select or make an implement profile.</p> <p>See the information for selecting an implement profile.</p> <p>See the information for making an implement profile.</p> <p>Select or make a wayline profile.</p> <p>See the information for selecting a wayline profile.</p> <p>See the information for making a wayline profile</p>
U5003	<p>The wayline profile is not selected. The wayline profile must be selected before the system can be engaged.</p>	<p>Select or make a wayline profile.</p> <p>See the information for selecting an wayline profile.</p> <p>See the information for making an wayline profile.</p>
U5004	<p>The implement profile is not selected. The implement profile must be selected before the system can be engaged.</p>	<p>Select or make an implement profile.</p> <p>See the information for selecting an implement profile.</p> <p>See the information for making an implement profile.</p>

Message code	Problem	Correction
U5005	When using offsets, the wayline can vary and not be accurate.	Information only. No procedure required.
U5006	The guidance disengaged at the steering controller request.	Information only. No procedure required.
U5007	The implement overlap is too large for implement width.	Decrease the implement overlap. See the information for editing an implement profile.
U6000	The implement storage is near the maximum.	Delete the implement profiles that are not required. See the information for deleting an implement profile.
U6001	The implement storage has reached the maximum.	See U6000. Implement profiles must be deleted before continuing.
U6002	The automatic steering is disengaged.	Before engaging automatic steering, make sure all conditions for engaging are good. See the information for checking system status.
U6010	The number of the item profiles in the system has almost reached the maximum number.	Delete item profiles that are not required. See the information for deleting a system profile.

Message code	Problem	Correction
		<p>See the information for deleting an implement profile.</p> <p>See the information for making a wayline.</p> <p>If the problem continues, see your dealer.</p>
U6011	Cannot create a profile because the maximum number has been reached. Delete profiles that are not necessary before continuing.	See U6010.
U6401	The offset must be less than 100 m (300 ft).	<p>Decrease the amount of implement offset.</p> <p>See the information for editing an implement profile.</p>
U6402	The wayline automatic offset was selected without an implement being selected.	<p>Select or make an implement profile before continuing.</p> <p>See the information for making an implement profile.</p> <p>See the information for selecting an implement profile.</p>
U6403	The wayline automatic offset was selected without a wayline being selected.	<p>Select or make a wayline before continuing.</p> <p>Select or make a wayline.</p> <p>See the information for selecting a wayline.</p>

Message code	Problem	Correction
U6404	The wayline automatic offset was selected without a implement and wayline being selected.	<p>Select or make an implement profile.</p> <p>See the information for selecting an implement profile.</p> <p>See the information for making an implement profile.</p> <p>Select or make a wayline profile.</p> <p>See the information for selecting a wayline profile.</p> <p>See the information for making a wayline profile</p>
U6405	The wayline offset has been set to zero.	Information only. No procedure required.
U6406	The nudge has been set to zero.	Information only. No procedure required.
U6408	The wayline offset has been applied.	Information only. No procedure required.
U6409	The nudge increment has not been made.	<p>Make the nudge increment before continuing.</p> <p>See the information for making GPS drift compensation.</p>
U6410	Implement width is too small.	<p>Increase the implement width.</p> <p>See the information for editing an implement profile.</p>
U6671	The position accuracy is not good enough	Make sure the corrections are being received and wait for

Message code	Problem	Correction
	for making a wayline.	the Global Navigation Satellite System (GNSS) status icon to turn green. For more information on troubleshooting this problem, see automatic steering will not engage in the system troubleshooting chart.
U6672	An error has been found by the file server.	Reboot the system. If the problem continues, see your dealer.
U6750	The set of basic required receiver options is not up to date.	Give a report of the error to your dealer.
U6751	One or more of the subscription based correction sources is about to be out of date.	Give a report of the error to your dealer. .
U6900	The system cannot find a vehicle.	Give a report of the error to your dealer.
U6901	The system did not initialize.	Give a report of the error to your dealer.
U6902	There is a problem with the vehicle identification number.	Enter the vehicle identification number again. Give a report of the error to your dealer.
U6904	The machine geometry	Check the vehicle profile dimensions. Correct any dimension

Message code	Problem	Correction
	parameters are not correct.	<p>errors and then repeat the procedure that caused the error.</p> <p>See the information for editing a vehicle profile.</p> <p>If the problem continues, see your dealer.</p>
U6905	Unknown machine type.	<p>Select or edit the vehicle profile. Repeat the procedure that caused the error.</p> <p>See the information for selecting a vehicle profile.</p> <p>See the information for editing a vehicle profile.</p> <p>If the problem continues, see your dealer.</p>
U6980	Calibration cannot be performed while there is no Global Positioning System (GPS) lock.	<p>The problem is a GNSS error. Wait for GPS lock and try again.</p> <p>For more information on troubleshooting this problem, see automatic steering will not engage in the system troubleshooting chart (position accuracy error).</p>
U7106	The internal memory is almost full.	<p>The wayline, implement, or vehicle profiles can be deleted to prevent data loss. Delete the item profiles that are not required.</p>

Message code	Problem	Correction
		<p>See the information for deleting a wayline.</p> <p>See the information for deleting an implement profile.</p> <p>See the information for deleting a vehicle profile.</p> <p>If the problem continues, see your dealer.</p>
U7107	The internal memory is full. Wayline, implement, NMEA, and vehicle profiles can be deleted to make more space.	See U7106.
U7107	Error occurred in selecting or making a wayline.	<p>Delete any waylines that are not required.</p> <p>See the information for deleting a wayline.</p> <p>Shut down the system and then start the system again. Repeat the procedure that caused the error.</p> <p>If the problem continues, see your dealer.</p>
U7110	A waypoint cannot be set. There must be a minimum distance of 10 m (30 ft) between the waypoints and a sufficient GNSS fix.	<p>There must be a minimum distance of 10 m (30 ft) between the waypoints and a sufficient GNSS fix.</p> <p>Drive a minimum of 10 m (30 ft) before selecting the wayline finish button.</p>

Message code	Problem	Correction
		See the information for making a wayline.
U7111	The present wayline was made with a different correction source, causing the wayline location to vary.	Information only. No procedure required.
U7114	The system is not ready for making a wayline.	<p>If this error occurs, do the following:</p> <ul style="list-style-type: none"> • Make sure the machine has moved since the system was started. • Check the GNSS information screen. The latitude and longitude must be set to non-zero. The position accuracy must be better than the minimum for the correction source. <p>See the information for viewing the GNSS.</p> <ul style="list-style-type: none"> • See the information for required position accuracy • Make sure the compass has been calibrated. <p>See the information for calibrating the compass.</p>

Message code	Problem	Correction
		<ul style="list-style-type: none"> • If the compass cannot be calibrated, see the information for enabling and disabling the compass. • Make sure the vehicle is parked in an open area away from any object that can be an obstruction to a satellite signal. Make sure the external settings and correction source settings are correct and the correction source status is good. <p>See the information for viewing correction setup.</p> <ul style="list-style-type: none"> • If the problem continues, see your dealer.

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