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Introduction

Important Information
This guide provides the basic information needed to install the Ag Leader SteerCommand steering system on a vehicle using the specified vehicle kit. It is intended to be used by Ag Leader dealers who are trained and knowledgeable about the installation of such systems.

It is important to read this guide prior to beginning the installation. This guide contains warnings of potential hazards, and a collection of best practices that will help your installation go smoothly, safely and be successful.

Trademark
All brands and product names, unless otherwise stated, are registered trademarks of Ag Leader® Technology.

Technical Support
Contact your Ag Leader Dealer or Ag Leader Technology for technical support.

- **Telephone:** (515) 735–7000
- **Email:** support@agleader.com

Legal Disclaimer

* **NOTE:** Read and follow all instructions in this manual and the SteerCommand Operator’s Manual carefully before installing or operating the steering system.

* **NOTE:** Take careful note of safety information in this manual and additional safety messages provided throughout this and any other supplemental manuals provided.

* **NOTE:** Ag Leader Technology disclaims any liability for damage or injury that results from failure to follow instructions, cautions and warnings communicated in this guide.

1. There is no obstacle avoidance system included with this automated steering product. An operator must always be present in operator’s seat when the automated steering system is in use to avoid obstacles and take over control when necessary.

2. The automated steering system does not control speed of the vehicle. The operator must always adjust speed of the vehicle manually to obtain an appropriate setting that will not cause vehicle to roll over or go out of control.

3. The automated steering system will take over control of vehicle’s steering system when activated during testing, calibration, tuning, and automatic steering operations. Vehicle’s steering axles, tracks, articulation point, or wheels may move unpredictably when activated. Prior to starting a vehicle and/or activating the guidance system, verify that all people and obstacles are clear of vehicle to prevent death, injury, or damage to property.

4. Use of this automated steering system is not permitted while a vehicle is on public roads or in public areas. Verify that system is powered off before driving on roads or in public areas.
Supported Vehicles

This install guide outlines details of the installation of the steering system for Hagie STS Series sprayers that are steer ready from the factory or have an existing competitor’s steering system installed. These vehicles will require the installation of a Vehicle Steering Kit. Below is a list of supported vehicle models and the corresponding kit numbers:

<table>
<thead>
<tr>
<th>Vehicle Model</th>
<th>Kit Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hagie STS MY 2014/2015 Steer Ready</td>
<td>4100950-105</td>
</tr>
<tr>
<td>Hagie STS/DTS MY 2016/2017 Steer Ready</td>
<td>4100950-125</td>
</tr>
</tbody>
</table>
## Installation Overview

### Vehicle Steering Kit BOM (Hagie STS MY 2014/2015)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4002726-2</td>
<td>1</td>
<td>CABLE – HAGIE STEERING HARNESS</td>
</tr>
<tr>
<td>4003593-2</td>
<td>1</td>
<td>CABLE – HAGIE STS CHASSIS BULKHEAD</td>
</tr>
<tr>
<td>4003963-1</td>
<td>1</td>
<td>CABLE – HAGIE REMOTE ENGAGE ADAPTER</td>
</tr>
<tr>
<td>4003592-1</td>
<td>1</td>
<td>CABLE – HAGIE STS CAB BULKHEAD</td>
</tr>
<tr>
<td>4004341-2</td>
<td>1</td>
<td>CABLE – GPS 6000/6500 CAB BULKHEAD</td>
</tr>
<tr>
<td>4004342-12</td>
<td>1</td>
<td>CABLE – GPS 6000/6500 CHASSIS BULKHEAD</td>
</tr>
<tr>
<td>4100194</td>
<td>1</td>
<td>HARDWARE KIT – STEERCOMMAND</td>
</tr>
</tbody>
</table>

### Vehicle Steering Kit BOM (Hagie STS/DTS MY 2016/2017)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4002726-2</td>
<td>1</td>
<td>CABLE – STEERING HARNESS</td>
</tr>
<tr>
<td>4004205-3</td>
<td>1</td>
<td>CABLE – HAGIE STS CHASSIS BULKHEAD, ISOBUS</td>
</tr>
<tr>
<td>4003963-1</td>
<td>1</td>
<td>CABLE – HAGIE REMOTE ENGAGE ADAPTER</td>
</tr>
<tr>
<td>4004204-1</td>
<td>1</td>
<td>CABLE – HAGIE STS CAB BULKHEAD, ISOBUS</td>
</tr>
<tr>
<td>4004341-2</td>
<td>1</td>
<td>CABLE – GPS 6000/6500 CAB BULKHEAD</td>
</tr>
<tr>
<td>4004342-12</td>
<td>1</td>
<td>CABLE – GPS 6000/6500 CHASSIS BULKHEAD</td>
</tr>
<tr>
<td>4100194</td>
<td>1</td>
<td>HARDWARE KIT – STEERCOMMAND</td>
</tr>
</tbody>
</table>

### SteerCommand Kit BOM (Purchase Separately)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-0016-01</td>
<td>1</td>
<td>STEERCOMMAND CONTROL UNIT</td>
</tr>
<tr>
<td>201-0605-02</td>
<td>1</td>
<td>STEERCOMMAND MAIN HARNESS</td>
</tr>
<tr>
<td>602-0571-01</td>
<td>1</td>
<td>MANUAL OPERATOR STEERCOMMAND</td>
</tr>
</tbody>
</table>
• **NOTE:** An additional Ag Leader Display Kit, Display Cable Kit and GPS/GNSS Receiver Kit will also need to be purchased separately to complete the vehicle install.

• **NOTE:** Contact your local Ag Leader dealer if the machine is equipped with a Raven rate controller.

• **NOTE:** Only one vehicle kit is needed per machine. The kit is determined by the model year of the machine.

**Vehicle Inspection**

For optimum performance and safety the vehicle steering system must be in good working condition prior to any installation activities.

- Inspect the vehicle for loose or worn steering components, cables and connectors.
- Drive the vehicle to verify it steers straight without pulling to the right or left.
- Confirm the steer axle or pivot will move to right and left lock positions.
- Verify the electrical system and batteries are in acceptable condition.
- Remove excess dirt and debris for easier kit installation.
- Confirm tire pressures are within suggested factory recommended values.
Figure 1: Hagie STS MY 2014 - 2015 Component and Cable Layout

NOTE: GRAY ITEMS ARE NOT INCLUDED IN THE KIT. ORDER SEPARATELY.
Figure 2: Hagie STS/DTS MY 2016 - 2017 Component and Cable Layout
Steering System Installation

Cab Installation

Purchased Separately/Previously Installed On Vehicle:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM DISPLAY KIT (NOT INCLUDED)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>1</td>
<td>AG LEADER DISPLAY</td>
</tr>
<tr>
<td>*</td>
<td>1</td>
<td>DISPLAY CABLE</td>
</tr>
<tr>
<td>4000279</td>
<td>1</td>
<td>5” RAM ARM</td>
</tr>
<tr>
<td>*</td>
<td>1</td>
<td>RAM MOUNT BASE</td>
</tr>
<tr>
<td>*</td>
<td>1</td>
<td>GPS/GNSS RECEIVER</td>
</tr>
</tbody>
</table>

* MULTIPLE DISPLAY/DISPLAY CABLE/RECEIVER OPTIONS AVAILABLE

Installation Procedure:

1. Disconnect batteries from electrical system.

2. Remove plastic molding from cab pillar to enable display cable routing through pillar.
1. Remove access panel of console.
2. Route display cable from console through pillar up to display.

3. Attach square RAM mounting base provided in display kit to back of display.
4. Secure display to RAM base located on cab ceiling using RAM Arm.
   - **NOTE:** Mount display in a convenient location for operation, but out of the operator’s line of sight during normal operation.

5. Connect round connector(s) on Display Cable to mating connector(s) on back of AgLeader Display.
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>Remove external cab access panel on RH side of cab.</td>
</tr>
<tr>
<td>7.</td>
<td>Secure GPS Bulkhead cable to an existing hole in cab floor. It may be necessary to remove and replace original bulkhead cable. Secure using existing screws. Connect DB9 male connector to mating connector of display cable.</td>
</tr>
<tr>
<td>8.</td>
<td>Connect GPS chassis cable to the GPS antenna and mate other end to GPS bulkhead cable.</td>
</tr>
</tbody>
</table>
| 9.   | Mount the SteerCommand Controller to the floor of the cab inside the console using the existing threaded inserts in the floor and the hardware provided.  
   **NOTE:** There may be plugs installed in the threaded inserts. If this is the case, remove the plugs before installing the SteerCommand Controller.  
| 10.  | Connect the main SteerCommand harness to the SteerCommand controller. |
11. Connect the Power Activation connector and the ethernet cable to the mating connectors on the display cable. Leave the connector labeled Unswitched Power disconnected for now.

- **NOTE:** For this particular install, the connectors labeled Serial, Vehicle CAN B, and Expansion CAN A will not be used.

12. Connect the Hagie Steering Harness to the SteerCommand Controller

13. Connect the plug from the Hagie Steering Harness to the receptacle of the Hagie Remote Engage Adapter. Secure the ring terminal to the battery ground stud within the console.

14. Connect the plug of the Remote Engage Adapter to the corresponding machine connector within the console labeled Autosteer Enable. Find the machine receptacle labeled ACH2 and join it with the mating plug on the Hagie Steering Harness.
15. Also, connect the Hagie Steering Harness to the machine harness labeled AWS/Autosteer Kickout.

- **NOTE:** Follow steps 18-19 for MY 2014 – 2015. If the machine is a MY 2016 -2017, skip to step 20.

16. Mount the Cab Bulkhead cable, PN: 4003592-1 through an existing hole in the floor or replace the OEM bulkhead cable. Secure using the existing hardware.
17. Reference Figure 1 and join appropriate connectors to their mating connectors on the display cable and the SteerCommand Main Harness.

- **NOTE:** When mating the CAN A connector use a Y splice and the ITT CAN Plug which has a blue seal as opposed to brown. Connections are shown in line art.

18. Mount the Cab Bulkhead cable through an existing hole in the floor or replace the OEM bulkhead cable. Secure using the existing hardware.

19. Reference Figure 2 and join appropriate connectors to their mating connectors on the display cable and the SteerCommand Main Harness.

- **NOTE:** The ISOBUS connector will not be used for the SteerCommand kit.
# Chassis Installation

**Installation Procedure:**

1. Route the Hagie STS Chassis Bulkhead Cable underneath the cab.

2. Beneath cab, locate Cab Bulkhead connector you just installed in floor and connect the Chassis Bulkhead Cable.

3. Connect the ring terminals to the appropriate power terminals.

4. After all steps have been completed, reconnect batteries to the electrical system.
Setting up the Display

Installation Procedure

1. Refer to the SteerCommand Owner’s Manual for setting up the display and tuning instructions.
Post-Installation Checklist

☐ Display installed and all fasteners are tight.

☐ GPS antenna is installed.

☐ SteerCommand is installed firmly to floor and all fasteners are tight.

☐ All cable ends and terminations are connected.

☐ All cables are secured with cable ties.