



P/N: 396-6180Y1-EN

Rev.03.22.2024

GFX Hydraulic Row Cleaners



Operator's Manual
Model 5010

System Identification

Thank you for your business!

System Purchased: _____

Serial Number: _____

Sales Order: _____

Date Purchased: _____

Dealer: _____

Address: _____

City/State/Zip: _____

Phone/E-mail/Website: _____

Additional Notes: _____



SurePoint Ag Systems

9904 Highway 25

Atwood, KS 67730

Call: 866-626-3670

Text: 785-626-8561

Support: support.surepointag.com

Webstore: store.surepointag.com

Table Of Contents

Chapter 1: Introduction	1-1
Warranty	1-1
End User License Agreement	1-2
Chapter 2: Safety.....	2-1
Signal Words	2-1
Hydraulic Fluid	2-2
Personal Protective Equipment	2-2
Serial Number Plate	2-3
Pinch Points.....	2-3
Chapter 3: Components.....	3-1
Mechanical Components	3-1
Electrical System	3-2
Hydraulic System.....	3-3
Chapter 4: Installation	4-1
Mount Kits.....	4-1
Spacer Kits.....	4-2
Mounting Plates.....	4-7
Yoke and Cylinder Assembly	4-8
Trashwheels and Depth Bands.....	4-9
Stem Assembly.....	4-11
Hydraulic Assembly.....	4-12
Hydraulic Valve Stacking	4-14
Hydraulic Control Valve Plumbing	4-15
Hydraulic Hose Routing.....	4-17
Chapter 5: Setup	5-1
GFX VT Icons.....	5-1
GFX VT Pages.....	5-2
VT Setup	5-10
Hydraulic Circuit Bleeding.....	5-12
GFX Operation.....	5-12
Chapter 6: Maintenance	6-1
Chapter 7: Parts Breakdown	7-1
Harness Schematics	7-1
Universal Mount Kits.....	7-5
Mechanical Assemblies.....	7-8
Cylinder Assembly.....	7-9
Hubs and Trashwheels	7-10
Hydraulic Components.....	7-11

Table Of Contents

SurePoint Ag Systems

Warranty

Warranty Policy

SurePoint Ag Systems, Inc. (hereinafter referred to as “SurePoint”) warrants the whole goods products it sells to be free from defects in material or workmanship for a period of one (1) year from the date of sale of the product(s) to the original user.

SurePoint warrants the parts it sells to be free from defects in material or workmanship for a period of ninety (90) days from the date of delivery of the product(s) to the original user. This shall include replacement parts installed by SurePoint.

Warranty of SurePoint whole goods and/or parts applies only to material and workmanship. Misuse, misapplication, neglect, alteration, accident, normal wear, or acts of God affecting SurePoint products are not eligible for warranty. Warranty shall apply only to the smallest reasonably serviced component (e.g. if a PWM solenoid fails on a hydraulic pump assembly, only the solenoid will be covered under warranty, not the entire pump assembly). In the event that multiple components are replaced, component warranty eligibility will be assessed once the parts are returned to SurePoint for determination of failure (parts determined to still be in working order will be returned to the dealer and warranty will not apply to those components).

WARRANTY CLAIMS: A warranty claim and request to return defective product(s) must be presented to the SurePoint Support Department, describing the defect in material or workmanship of the product(s). This claim may be made via phone, e-mail, fax, or written request. Claims for warranty of whole goods or parts must also include proof of date of sale of the product(s) to the original user.

The SurePoint Support Department will proceed in making a preliminary decision as to the eligibility of the claim for warranty consideration. After the SurePoint Support Department deems it necessary to proceed with warranty consideration, a determination will be made as to whether or not the original product needs to be returned to SurePoint. In the event a return is deemed necessary, a Return Materials Authorization (RMA) will be generated by the SurePoint Support Department. The defective product(s) in question must be sent, freight prepaid, within fourteen (14) days of the discovery of the product failure and initial warranty claim. Replacement product(s) may be sent to the selling dealer, directly to the customer, or picked up at the SurePoint facility. At the discretion of the SurePoint Support Department, replacement product(s) may be sent prior to, or after, the SurePoint Returns Department receives the defective product(s).

Any variation in the above procedure is at the sole discretion of the SurePoint Support Department.

SurePoint agrees to handle all warranty claims in a timely manner and will inform dealers of any revisions or modifications to the SurePoint Warranty Policy. Eligible warranty claims will be processed by SurePoint within sixty (60) days of receiving failed product(s).

If a warranty claim is found to be ineligible for warranty coverage, the SurePoint Support Department will be responsible to inform the dealer or end user in order to determine the course of action to be taken. SurePoint reserves the right to make changes in specification and design without notice and without incurring any obligations to owners of products previously sold.

End User License Agreement

LICENSE AGREEMENT FOR EMBEDDED SOFTWARE

IMPORTANT -- READ CAREFULLY: THIS LICENSE AGREEMENT IS A LEGAL CONTRACT BETWEEN YOU AND SUREPOINT AG SYSTEMS, INC., A KANSAS CORPORATION, HAVING A PRINCIPAL ADDRESS OF 9904 HWY 25, ATWOOD, KANSAS 67730 (THE "LICENSOR"). THIS LICENSE AGREEMENT GOVERNS YOUR USE OF ANY SOFTWARE AND OTHER MATERIALS (SOFTWARE AND OTHER MATERIALS INDIVIDUALLY OR COLLECTIVELY REFERRED TO AS "**LICENSED MATERIALS**" OR "LM") THAT IS (1) PROVIDED BY LICENSOR OR ITS AFFILIATES; (2) EMBEDDED OR INSTALLED IN, OR ASSOCIATED WITH, ANY DISPLAY, ENGINE CONTROL UNIT, INVERTER, CONTROLLER, ELECTRONICS MODULE, SENSOR, ACTUATOR, OR COMPUTING UNIT (INDIVIDUALLY OR COLLECTIVELY "LICENSED PRODUCTS" OR "LP") THAT IS MADE A PART OF A SALE OR LEASE TO YOU ("**AUTHORIZED EQUIPMENT**"); AND (3) NOT OTHERWISE LICENSED BY A SEPARATE WRITTEN AGREEMENT BETWEEN YOU AND LICENSOR OR ITS AFFILIATES, OR (4) NOT OTHERWISE LICENSED BY A THIRD PARTY (OR SUPPLIER).

BY ACTIVATING OR OTHERWISE USING THE LP, YOU ARE ACCEPTING AND AGREEING TO THE TERMS OF THIS LICENSE AGREEMENT WITH RESPECT TO THE LM THAT HAVE BEEN PRE-INSTALLED ON YOUR LP. YOU AGREE THAT THIS LICENSE AGREEMENT, INCLUDING THE WARRANTY DISCLAIMERS, LIMITATIONS OF LIABILITY, TERMINATION, AND ARBITRATION PROVISIONS BELOW, IS BINDING UPON YOU, AND UPON ANY COMPANY ON WHOSE BEHALF YOU USE THE LM AND LP AS WELL AS THE EMPLOYEES OF ANY SUCH COMPANY (COLLECTIVELY REFERRED TO AS "YOU" IN THIS LICENSE AGREEMENT). IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE AGREEMENT, OR IF YOU ARE NOT AUTHORIZED TO ACCEPT THESE TERMS ON BEHALF OF YOUR COMPANY OR ITS EMPLOYEES, DECLINE THESE TERMS AND CONDITIONS AND DO NOT USE THE LP OR THE AUTHORIZED EQUIPMENT. THIS LICENSE AGREEMENT REPRESENTS THE ENTIRE AGREEMENT CONCERNING THE LM BETWEEN YOU AND THE LICENSOR AND IT REPLACES ANY PRIOR PROPOSAL, REPRESENTATION, OR UNDERSTANDING BETWEEN YOU AND THE LICENSOR.

- Definitions. Licensed Materials ("LM") shall mean any software, data files, documentation, engine calibration tables, proprietary data messages, and controller area network (CAN) data messages that are in or communicated to or from any LP (e.g., to monitor, diagnose, or operate the Authorized Equipment). Data files shall include but not be limited to any data structure that adjusts engine control parameters, such as fuel metering, fuel injection rate, fuel injection timing, fuel pressure, engine speed versus torque relationship, intake boost pressure, fuel-to-air ratio or engine timing.
- License. Licensor hereby grants to you, and you accept, a nonexclusive license to use the LM in machine-readable, object code form, only as authorized in this License Agreement and the applicable provisions of the Operators' Manuals, which you agree to review carefully prior to using the LM. The LM may be used only on the LP in which it was initially installed and solely in conjunction with the Authorized Equipment in which it was initially installed; or, in the event of the inoperability of that LP, on a replacement LP provided to you by an authorized dealer pursuant to the Limited Warranty of Section 7 unless otherwise mandated under applicable law. You agree that you will not assign, sublicense, transfer, pledge, lease, rent, or share your rights under this License Agreement, except that you may permanently transfer all of your rights under this License Agreement in connection with the sale of the LP or Authorized Equipment. If you sell or otherwise transfer the ownership of the LP or your Authorized Equipment, you agree that you will require such transferee to accept terms no less restrictive than those in this License Agreement.
- Licensor's Rights. You acknowledge and agree that the LM are proprietary to Licensor, or its affiliates or licensors, and are protected under copyright law, trade secret law, and laws governing confidential information. You shall maintain the confidentiality of the LM, any nonpublic information in the LM and the source code of the software, regardless of whether the LM are labeled or marked with any proprietary legend or notice that indicates its confidential

nature. You further acknowledge and agree that all right, title, and interest in and to the software and the LM, including associated intellectual property rights, are and shall remain with Licensor, its affiliates, and their licensors. This License Agreement does not convey to you any title or interest in or to the LM, but only a limited right of use revocable in accordance with the terms of this License Agreement. Licensor, its affiliates and their licensors reserve all worldwide rights not expressly granted under this Agreement.

- License Restrictions, Reverse Engineering. You may not reproduce, prepare derivative works based on, disclose, publish, distribute, rent, lease, modify, loan, display, or perform the LM or any part thereof. You may not reverse engineer, decompile, translate, adapt, or disassemble the LM, nor shall you attempt to create the source code from the object code for the software. You may not transmit the LM over any network or via a hacking device, although you may use the LM to make transmissions of diagnostic data messages that are authorized by Licensor and you may receive software updates authorized by Licensor. You also agree not to permit any third party acting under your control to do any of the foregoing activities related to reverse engineering of the Licensed Materials. You agree not to remove or obliterate any copyright, trademark or other proprietary rights notices from the LM, except as expressly permitted in writing by Licensor or its licensors or expressly permitted under applicable law notwithstanding these restrictions.

- License Restrictions, Circumvention. Security measures ("SM") means any of the following: technological measures under the Digital Millennium Copyright Act, copyright protection measures, application enabling mechanisms, passwords, key codes, encryption or other security devices. You agree that you will not: (a) attempt to defeat a SM or defeat a SM that protects the LM and that would constitute a violation under applicable law related to circumvention of technological measures that protect software, copyrighted works, or other intellectual property rights, and (b) traffic in, purchase, manufacture, design, import, offer, sell or distribute

any circumvention or hacking device that is designed to circumvent or hack the LM or LP to the extent unlawful under applicable law.

6. Consideration, License Fees. The license fees or other good and valuable consideration paid by you are paid in consideration of the licenses granted under this License Agreement.

7. Limited Warranty. Licensor warrants, for your benefit alone and not for the benefit of any other party, that during the "Warranty Period" defined below, the Software will operate substantially in accordance with the applicable functional specifications ("Specifications") set forth in the Operators' Manuals. If, prior to expiration of the Warranty Period, the software fails to perform substantially in accordance with the Specifications, you may return the LP to the place of purchase for repair or replacement of the non-performing software. As used in this License Agreement, the "Warranty Period" is the lesser of one (1) year from the date you take delivery of the LP or any lesser warranty associated with your purchase of your Authorized Equipment on which the LP is installed or incorporated.

8. DISCLAIMER OF WARRANTIES. YOU HEREBY AGREE THAT THE LIMITED WARRANTY PROVIDED ABOVE (THE "LIMITED WARRANTY") CONSTITUTES YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY PROBLEM WHATSOEVER WITH THE LICENSED MATERIALS. EXCEPT AS PROVIDED IN THE LIMITED WARRANTY, THE LICENSED MATERIALS **ARE LICENSED "AS IS,"** AND LICENSOR, ITS AFFILIATES, THEIR LICENSORS AND THIRD PARTY SUPPLIERS EXPRESSLY DISCLAIM AND YOU EXPRESSLY WAIVE, RELEASE AND RENOUNCE ALL WARRANTIES ARISING BY LAW OR OTHERWISE WITH RESPECT TO THE LICENSED MATERIALS, INCLUDING, BUT NOT LIMITED TO: ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; ANY IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE; ANY WARRANTY OF TITLE OR NON-INFRINGEMENT; AND, ANY OTHER WARRANTY ARISING UNDER ANY THEORY OF LAW, INCLUDING TORT, NEGLIGENCE, STRICT LIABILITY, CONTRACT OR OTHER LEGAL OR EQUITABLE THEORY. NO REPRESENTATION OR OTHER AFFIRMATION OF FACT INCLUDING, BUT NOT LIMITED TO, STATEMENTS REGARDING SUITABILITY FOR USE, SHALL BE DEEMED TO BE A WARRANTY BY LICENSOR, ANY OF ITS AFFILIATES, THEIR LICENSORS OR THIRD PARTY SUPPLIERS. NEITHER LICENSOR, NOR ITS LICENSORS, WARRANT THAT THE LICENSED MATERIALS, LICENSED PRODUCT AND/OR SOFTWARE IS ERROR-FREE OR WILL OPERATE WITHOUT INTERRUPTION.

9. LIMITATION OF LIABILITY. EXCEPT AS SET FORTH IN THE LIMITED WARRANTY, UNDER NO CIRCUMSTANCES SHALL LICENSOR, ITS AFFILIATES, THEIR LICENSORS OR THEIR THIRD PARTY SUPPLIERS BE LIABLE TO YOU OR TO ANY THIRD PARTIES FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING ANY LOSS OR DAMAGE CAUSED BY THE LICENSED MATERIALS; ANY PARTIAL OR TOTAL FAILURE OF THE LICENSED MATERIALS; PERFORMANCE, NONPERFORMANCE OR DELAYS IN CONNECTION WITH ANY INSTALLATION, MAINTENANCE, WARRANTY OR REPAIRS OF THE LICENSED MATERIALS, DAMAGES FOR CROP LOSS, DAMAGE TO LAND, DAMAGE TO MACHINES, LOST PROFITS, LOSS OF BUSINESS OR LOSS OF GOODWILL, LOSS OF USE OF EQUIPMENT OR SERVICES OR DAMAGES TO BUSINESS OR REPUTATION ARISING FROM THE PERFORMANCE OR NONPERFORMANCE OF ANY ASPECT OF THE SOFTWARE, LICENSED MATERIALS OR LP, WHETHER IN CONTRACT, TORT OR OTH-

ERWISE, AND WHETHER OR NOT LICENSOR, ITS AFFILIATES, THEIR LICENSORS OR THEIR THIRD PARTY SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL LICENSOR'S CUMULATIVE LIABILITY TO YOU OR TO ANY OTHER PARTY FOR ANY LOSSES OR DAMAGES RESULTING FROM ANY CLAIMS, LAWSUITS, DEMANDS, OR ACTIONS ARISING FROM OR RELATING TO USE OF THE LICENSED MATERIALS EXCEED THE LESSER OF YOUR TOTAL PAYMENT OR FAIR MARKET VALUE FOR THE LICENSED PRODUCT OR ITS EQUIVALENT REPLACEMENT.

10. Software Maintenance. Licensor may, at its sole option, offer you maintenance of the Software, even though the Warranty Period has expired. Such maintenance may include providing modifications, corrections or enhancements ("Upgrades") to the Software and/or the applicable Operators' Manuals. Licensor reserves the right, in its sole discretion, to charge you for maintenance (except in cases where corrections are provided under the Limited Warranty). Your acceptance of this License Agreement constitutes your agreement that any Upgrades will be deemed included in the Software as defined in this License Agreement and that they shall be governed by the terms and conditions applicable to the LM under this License Agreement.

11. Termination of License. Licensor may terminate the license granted under this License Agreement upon written notice of termination provided to you if you violate any material term of this License Agreement pertaining to your use of the LM or Licensor's rights, including, without limitation, the provisions of Sections 2 and 3 above.

12. Compliance with Law. You agree that you will use the LM in accordance with United States law and the laws of the country in which you are located, as applicable, including foreign trade control laws and regulations, copyright laws and other intellectual property laws. The LM may be subject to export and other foreign trade controls restricting re-sales and/or transfers to other countries and parties. By accepting the terms of this License Agreement, you acknowledge that you understand that the LM may be so controlled, including, but not limited to, by the Export Administration Regulations and/or the foreign trade control regulations of the Treasury Department of the United States. The LM remains subject to applicable U.S. laws.

13. Indemnification. You agree to defend, indemnify and hold Licensor, its affiliates, their licensors and third party suppliers, and their officers, directors, employees, agents and representatives (each an "Indemnified Party"), harmless from and against all claims, demands proceedings, injuries, liabilities, losses, or costs and expenses (including reasonable legal fees) brought by any third party against any such persons arising from or in connection with your use of the LM, regardless of whether such losses are caused, wholly or partially, by any negligence, breach of contract or other fault of an Indemnified Party.

14. Trademark. Licensor does not grant you any right, license, or interest in any Licensor trademarks, symbols, marks or names (collectively "Marks") or any trademarks that are confusingly similar to the Marks, and you agree that no such right, license, or interest shall be asserted by you with respect to such Marks.

15. Costs of Litigation. If any claim or action is brought by either party to this License Agreement against the other party regarding the subject matter hereof, the prevailing party shall be entitled to recov-

er, in addition to any other relief granted, reasonable attorney, arbitrators, and dispute resolution center administrative fees and expenses of litigation.

16. Severability and Waiver. Should any term or provision of this License Agreement be declared void or unenforceable by any court of competent jurisdiction, such declaration shall have no effect on the remaining terms and remaining provisions hereof. The failure of either party to enforce any rights granted hereunder or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to subsequent enforcement of rights of subsequent actions in the event of future breaches.

17. Language Clause. Unless the laws of the location in which you reside require otherwise, the parties hereby acknowledge that they have required this License Agreement, and all other documents relating hereto, be drawn up in the English language only. There may be a translated version of this License Agreement. If there is an inconsistency or contradiction between the translated version and the English version of this License Agreement, the English version of this License Agreement shall control unless the laws of the location in which you reside require that a different version control. The parties acknowledge and agree that they have required that this agreement be prepared in the English language. Les parties reconnaissent avoir exigé que les présentes soient rédigées en langue anglaise.

18. Assignment by Licensor. Licensor may assign this License Agreement without your prior consent to any company or entity affiliated with Licensor, or by an assignment associated with a corporate restructuring, merger or acquisition.

19. Governing Law and Forum. This License Agreement will be governed by and construed in accordance with the substantive laws in force in the State of Illinois, U.S.A. The respective state and federal courts of Cook County, Illinois and the Northern District of Illinois have exclusive jurisdiction over all disputes relating to this License Agreement. This License Agreement will not be governed by the conflict of law rules of any jurisdiction or the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded.

20. Arbitration. IF YOU RESIDE IN A JURISDICTION WHEREIN THE ENFORCEABILITY OF THE TERMS OF SECTION 19 IS DEPENDENT UPON THE PARTIES AGREEING TO SUBMIT TO ARBITRATION, THEN ANY CONTROVERSY OR CLAIM ARISING OUT OF OR RELATING TO THIS LICENSE AGREEMENT SHALL BE DETERMINED BY ARBITRATION IN ACCORDANCE WITH THE INTERNATIONAL ARBITRATION RULES OF THE INTERNATIONAL CENTRE FOR DISPUTE RESOLUTION ("ICDR") IN EFFECT AT THE TIME OF ITS INITIATION. THE ARBITRATION SHALL BE HELD BEFORE ONLY ONE ARBITRATOR APPOINTED BY THE ICDR. THE PLACE OF ARBITRATION SHALL BE CHICAGO, ILLINOIS, USA AND THE LANGUAGE OF THE ARBITRATION SHALL BE ENGLISH.

21. Representations of Licensee. BY ACCEPTING THIS AGREEMENT, YOU: (A) ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTAND THIS AGREEMENT; (B) REPRESENT THAT YOU HAVE THE AUTHORITY TO ENTER INTO THIS AGREEMENT; (C) AGREE THAT THIS AGREEMENT IS ENFORCEABLE AGAINST YOU AND ANY LEGAL ENTITY THAT OBTAINED THE LICENSED MATERIALS AND ON WHOSE BEHALF IT IS USED; AND, (D) AGREE TO PERFORM THE OBLIGATIONS OF THIS AGREEMENT.

22. Notices. All notices to Licensor shall be sent by certified or registered mail to SurePoint Ag Systems, Inc. 9904 Hwy 25 Atwood,

Kansas 67730 U.S.A. All notices to Licensor shall be effective upon receipt. **All notices required to be given to you shall, in Licensor's sole discretion, either be sent via certified or registered mail to the address given to Licensor, a dealer, or another distribution partner of Licensor in connection with your purchase of the LP and/or Authorized Equipment. Either method of notification used by Licensor shall be effective upon dispatch. You agree to notify Licensor of any change in your address in the manner set forth above.**

23. Third Party Software Notifications and Licenses. The copyrights for certain portions of the software may be owned or licensed by other third parties ("Third Party Software") and used and distributed under license. The Third Party Notices includes the acknowledgements, notices and licenses for the Third Party Software. The Third Party Notices are included with the distribution of this License Agreement on a display, online, or elsewhere. If you are unable to locate these Third Party Notices, please write to us at the address below. The Third Party Software is licensed according to the applicable Third Party Software license notwithstanding anything to the contrary in this Agreement. If the Third Party Software contains copyrighted software that is licensed under the GPL/LGPL or other copyleft licenses, copies of those licenses are included in the Third Party Notices. You may obtain the complete corresponding source code for such Third Party Software from us for a period of three years after our last shipment of the Software by sending a request letter to:

SurePoint Ag Systems, Inc.
9904 Hwy 25 Atwood
Kansas 67730
USA

Please include name of the product and the version number of the software in the request letter. This offer is valid to anyone in receipt of this information.

Safety

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



**THIS SYMBOL MEANS
ATTENTION!**

BECOME ALERT!

YOUR SAFETY IS INVOLVED!

Signal Words

Note the use of signal words DANGER, WARNING, and CAUTION with safety messages. The appropriate signal word for each has been selected using the following guidelines:

⚠ DANGER

DANGER indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

⚠ WARNING

WARNING indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

NOTICE is used to address safety practices not related to personal safety.

 **DANGER****Hydraulic Fluid Safety**

This system uses hydraulic equipment with hydraulic fluid under extremely high pressure.

Hydraulic fluid escaping under pressure can have sufficient force to penetrate the skin causing serious injury. Keep all hoses and connections in good serviceable condition. Failure to heed may result in serious personal injury or death. Avoid the hazard by relieving the pressure before disconnecting lines or performing work on the system.

Make sure hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system. Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. DO NOT DELAY!

Check hydraulic hoses and fittings frequently. Loose, broken, and missing hardware can cause equipment to not perform properly and can result in serious injury or death. Hydraulic systems can be hot and cause burns. Before working on any system, wait until the fluid has cooled.

If an accident occurs, see a doctor familiar with this type of injury immediately. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene may result.

A Word to the Operator

It is YOUR responsibility to read and understand the safety messages in this manual. YOU are the key to safety. SAFETY IS YOUR RESPONSIBILITY.

Personal Protective Equipment (PPE)

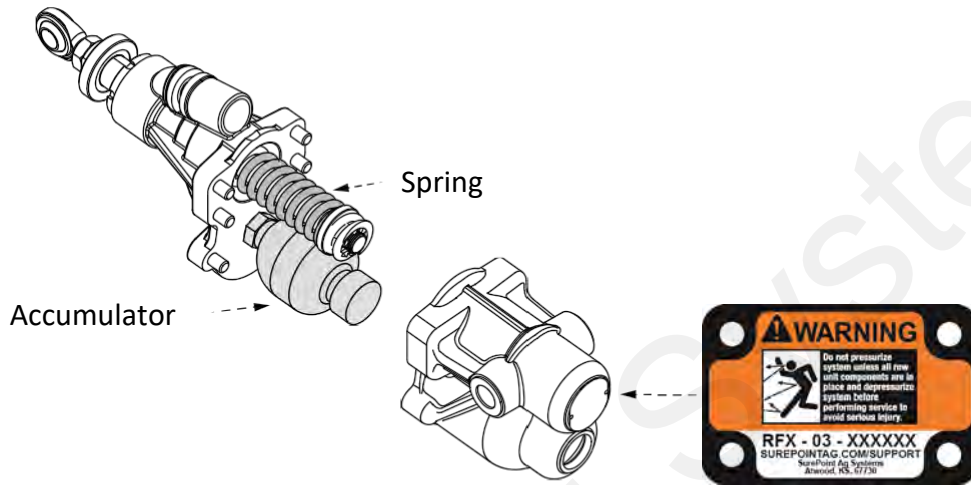
Wear clothing and personal protective equipment appropriate for the job. Wear steel-toed shoes when operating. Wear hearing protection when exposed to loud noises. Do not wear additional hearing impairment devices such as radio headphones, etc.

Prepare for Emergencies

Keep an adequate first aid kit and properly rated fire extinguisher nearby. Keep emergency numbers for fire, rescue, and poison control personnel near the phone.

Protective Casting

The protective casting makes up a large portion of the GFX unit volume. This protective casting encases a hydraulic accumulator which stores a large amount of energy. Never remove the protective cover from the unit without first discharging hydraulic pressure from the circuit. The accumulator should be serviced only after pressure is removed from the unit. No service or modification should be done to the accumulator.



Serial Number Plate

The serial number plate contains valuable information. The model number and serial number provide SurePoint dealers and the SurePoint service department with the exact specifications of your implement if any warranty or service issues need to be addressed.

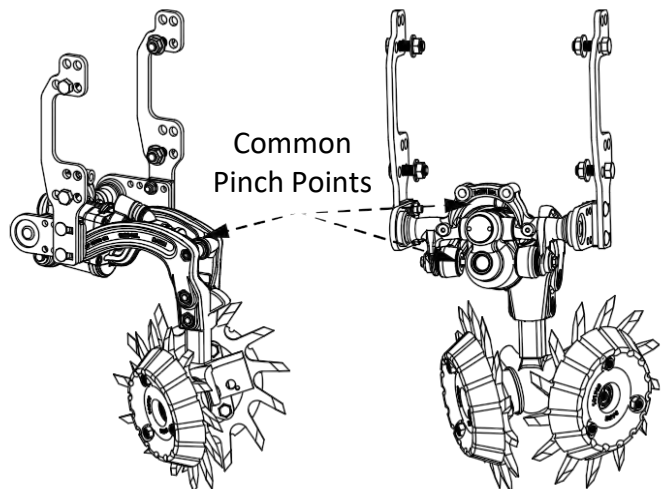
WARNING! Replace lost, damaged, painted, or unreadable serial plates. These decals inform and remind the operator with operational information and safety messages.

Pinch Points

The GFX is a dynamic device which connects many points of articulation where hands or loose clothing can become caught. For your safety, please be aware of how the unit operates and stay clear of pinch points.

WARNING! Operating or servicing the GFX or planter row unit with GFX hydraulic circuit charged may result in loss of limb or death. Only service unit with hydraulic line pressure discharged.

WARNING! Never remove unit fixing bolts without first discharging the circuit pressure and supporting the planter row unit with a jack or by resting on ground.



Mechanical Components

The GFX row cleaner mounts to the flying-W bracket on the frame of the toolbar in front of the row units.

1. Universal mounting kit—Choose which kit is needed depending on your model of planter. (Spacer kits may be necessary).
2. Yolk Assembly
3. Cylinder Assembly
4. Pivot Arm Assembly
5. Trashwheel
6. Depthband (if necessary)
7. Stem

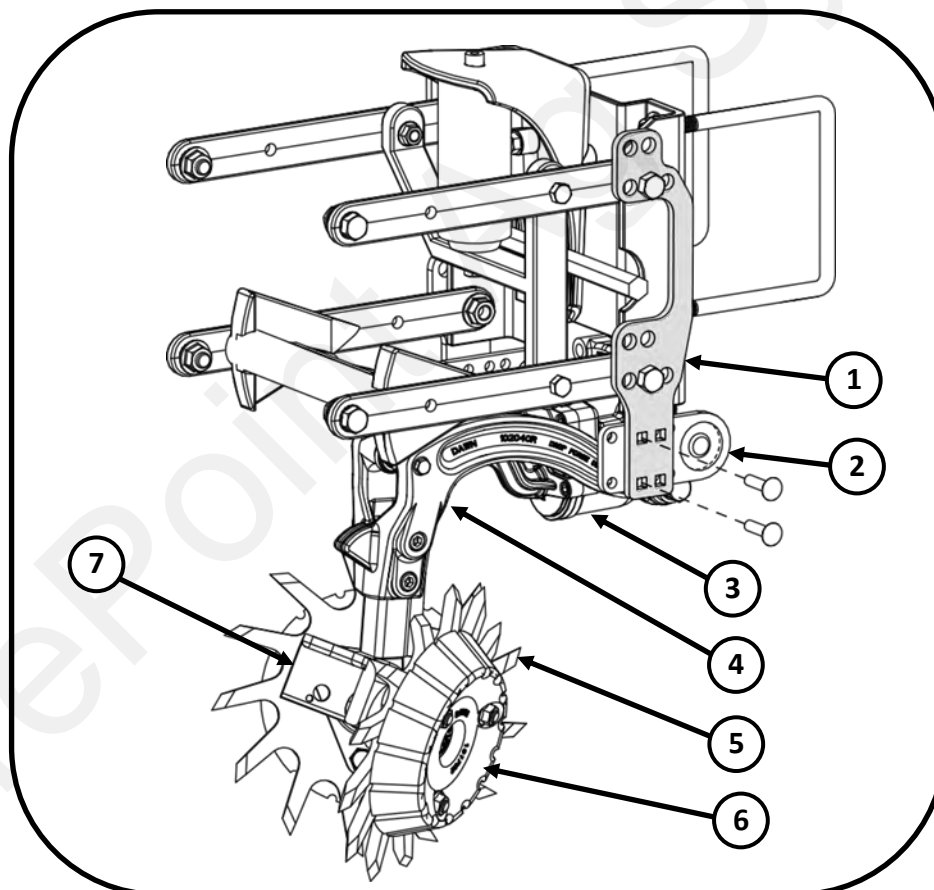
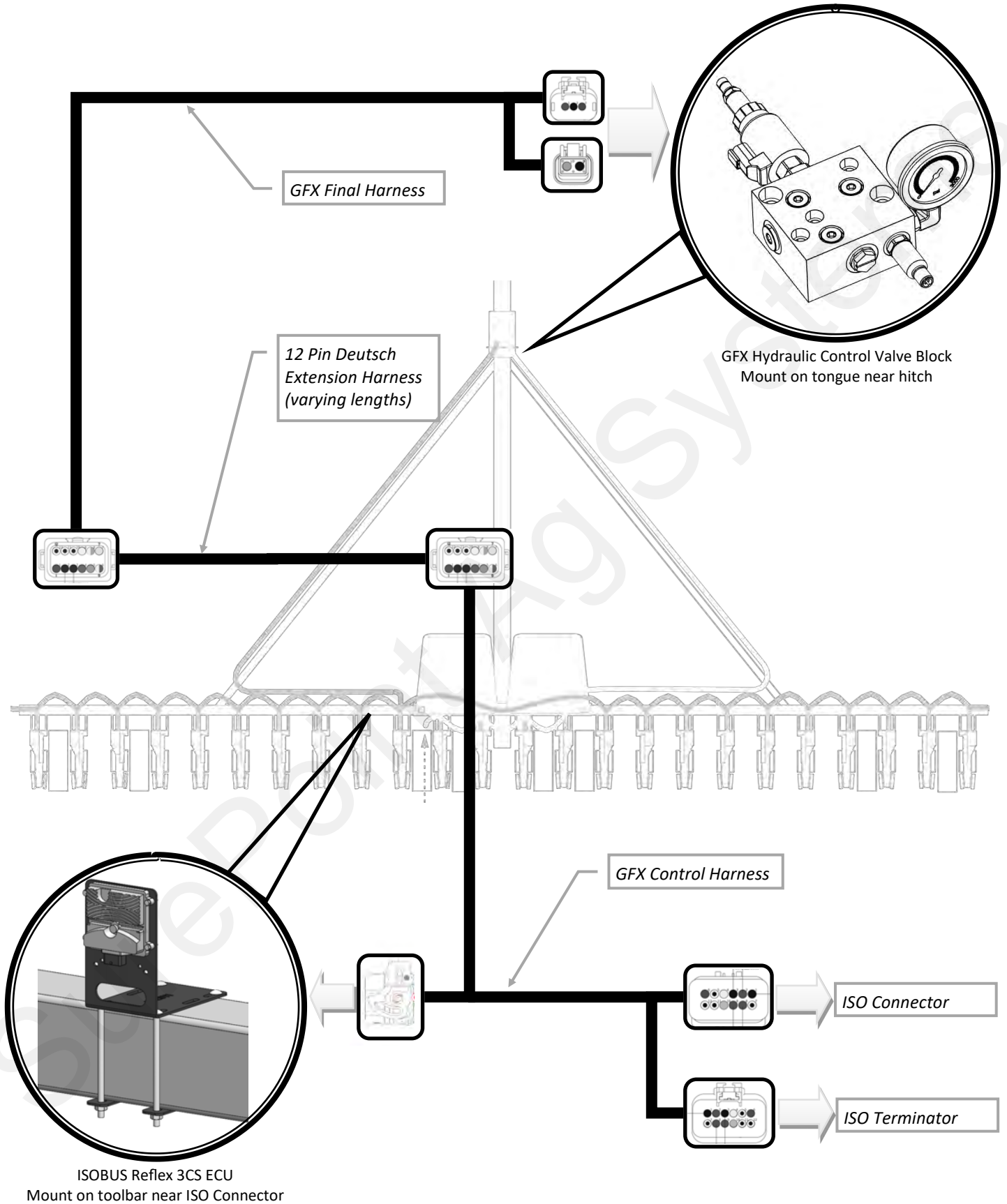


Figure 3.01

Electrical System Components—Harnessing



Hydraulic System Components—Hoses

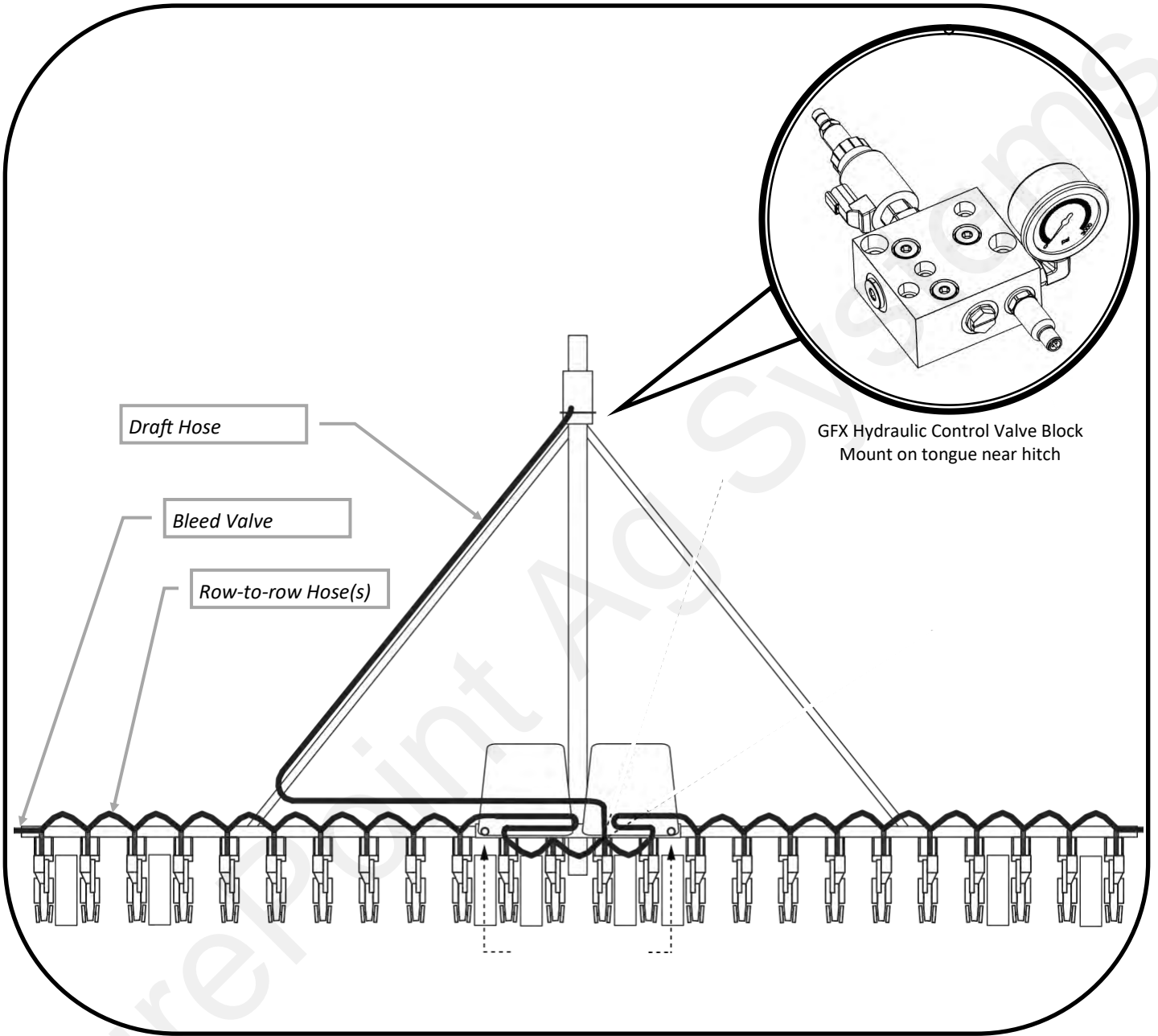


Figure 3.02

Pre-Installation—Mount Kits

Universal Mounting System

The SurePoint GFX and its universal mounting system is designed to fit a variety of modern planters. Due to the nature and variety of Original Equipment Manufacturers (OEMs), installation of individual row units will depend on a highly variable set of circumstances. As a result, care needs to be taken to insure compatibility as well as proper installation procedure. There may arise situations in which it will take some basic logistical skill in order to complete a functional and safe installation. If you do not feel comfortable installing your row units, please contact your dealer. For updated information about SurePoint products, please visit us online at www.Surepointag.com.

Planter Row Unit Width

The three most common planter widths are defined below. To ensure fit, measure the width of the “flying-W” or row unit mount bracket prior to ordering GFX units. (See figure XX). The GFX yoke (P/N: 485-6008Y1) is 12.75” wide.

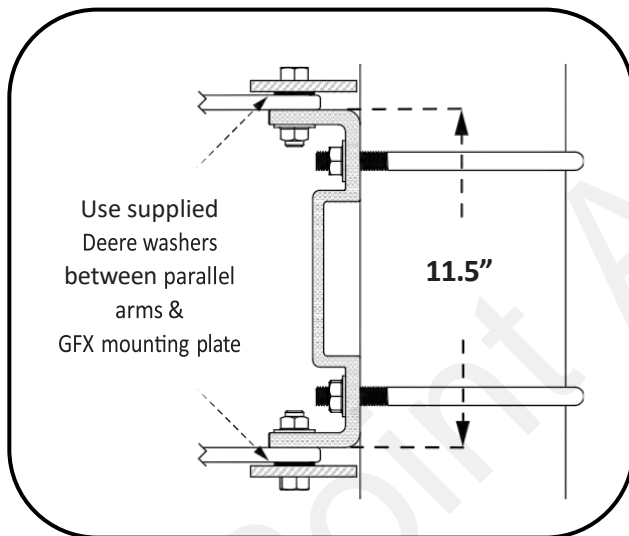
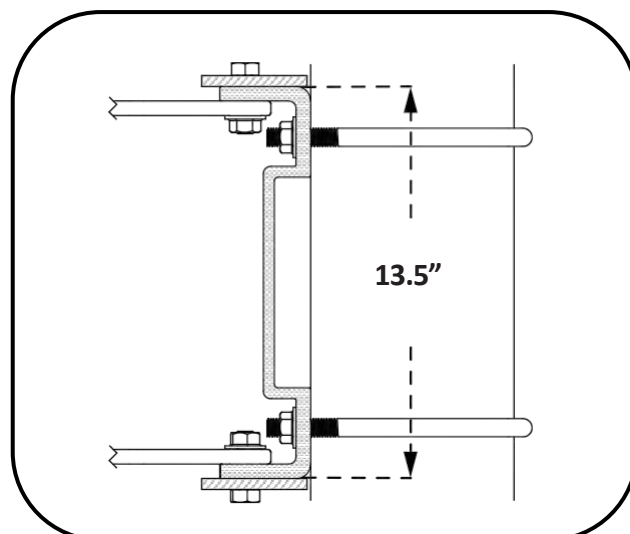


Figure 4.01:

John Deere **NARROW**—11.5” flying-W
Requires SurePoint kits #: 561-03-100100.
Bauer ships most of their toolbars and planters with the John Deere narrow unit configuration where the parallel arms sit on the outside of the flying-W.

Figure 4.02:
John Deere **WIDE**—13.5” flying-W
Requires SurePoint kit #: 561-03-100200,
which includes 3/8” spacers.
John Deere ships most of their toolbars
(i.e. 1770) with planters in this wide row
unit configuration where the parallel
arms sit on the inside of the flying-W.



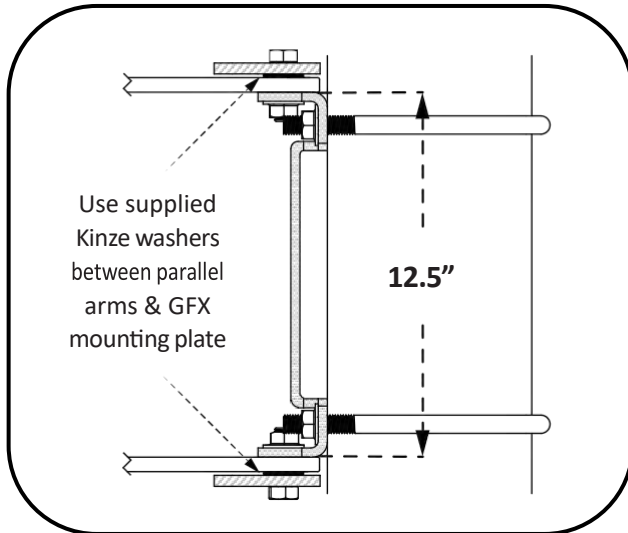


Figure 4.03:

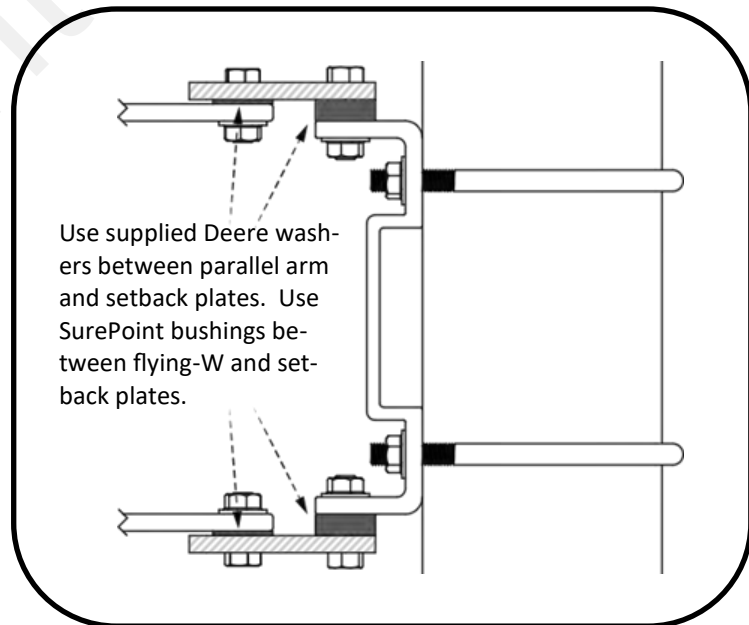
Kinze Units—12.5" flying-W
Requires SurePoint kits #: 561-03-100800, which include 1/2" spacers. Kinze ships most of their compatible row units in this configuration with the parallel arms on the outside of the flying-W.

Pre-Installation—Spacer Kits

Setback Rows

Some rows on your planter may face significant interference from varying design necessities such as folding points, seed vacuum tubes, weldments, toolbar and wing lift tires. In these situations, it will be necessary to install setback kits to insure proper function of your GFX row cleaners. A SurePoint setback kit is required for all setback units.

Figure 4.04:
Deere setback kit #: 561-03-100450
Correct orientation of SurePoint setback mount plates with Deere airbag spacer.



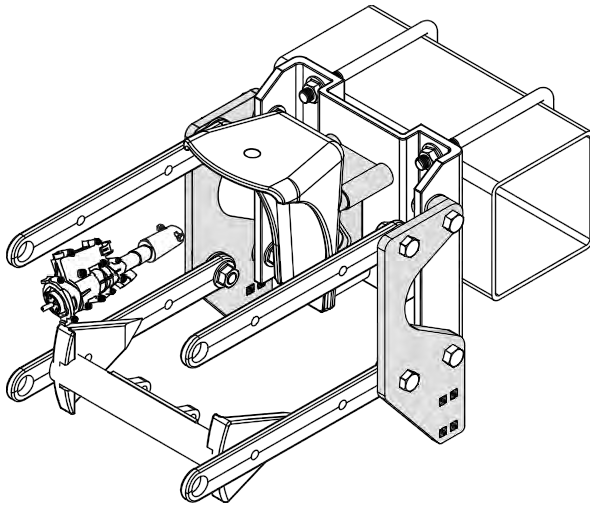


Figure 4.05:
Deere setback kit #: 561-03-100400
Correct orientation of SurePoint setback mount plates with Deere airbag spacer.

Figure 4.06:
Case setback kit #: 561-03-100900
Correct orientation of SurePoint setback mount plates with Case airbag spacer.

NOTE: Cannot mount to 1260 raised rows, or 1260-1265 caster rows.

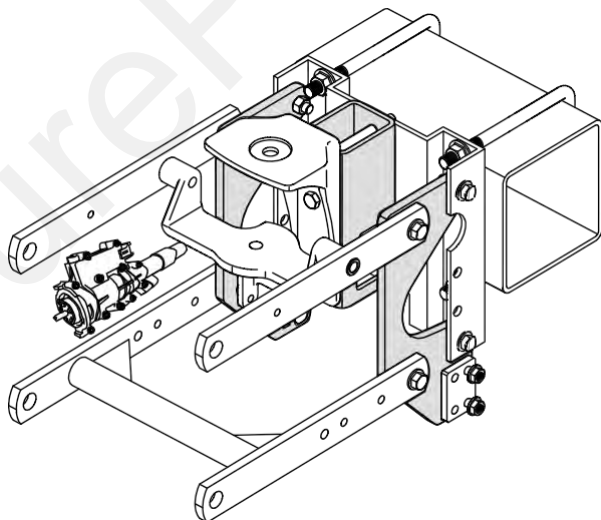
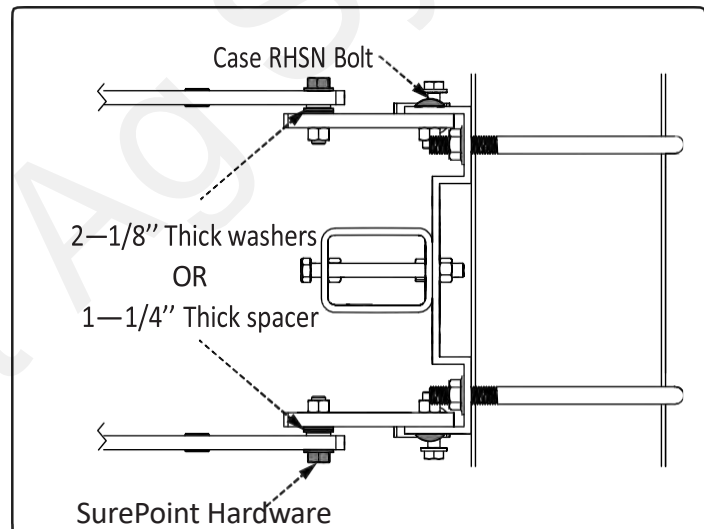


Figure 4.07:
Case setback kit #: 561-03-100950
Correct orientation of SurePoint setback mount plates with Case airbag spacer.

Mounting Plate Bolt Configuration

Please refer to these diagrams for a selection of the most common bolt configurations in order to place your SurePoint GFX mounting plates and GFX row unit correctly in relation to the planter row unit and toolbar. As a general rule, mount GFX units in a way that allows free movement along the full length of travel.

Note: Do **NOT** tighten bolts until mount plates and GFX yoke are installed. Refer to bolt torque specifications, figure 3.12. Do **NOT** over tighten bolts.

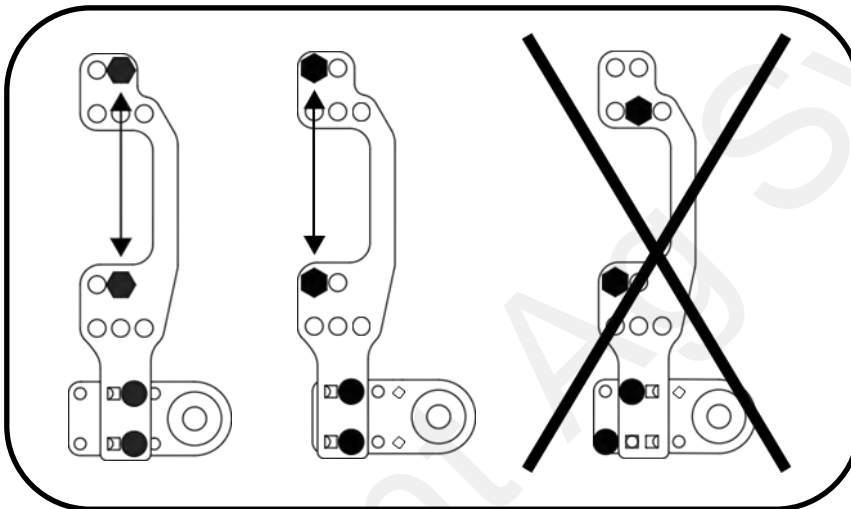
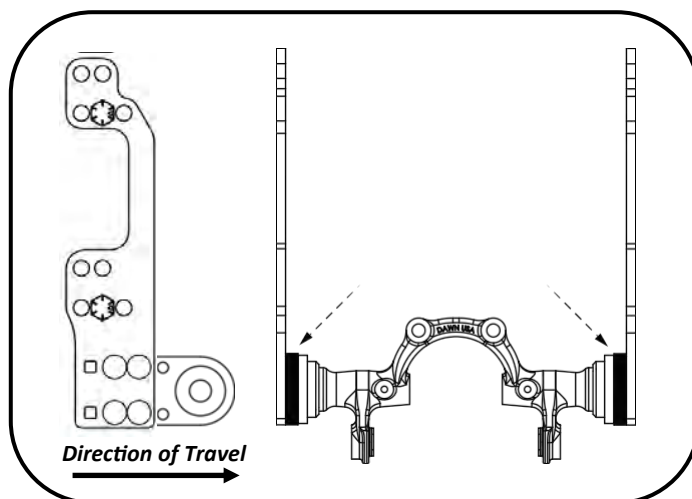


Figure 4.08: All bolt pairs must be aligned vertically

Figure 4.09: Kinze 12.5" (3000 series) row unit width with 1/2" spacers between GFX yoke and mounting plate. SurePoint kit # 561-03-100800



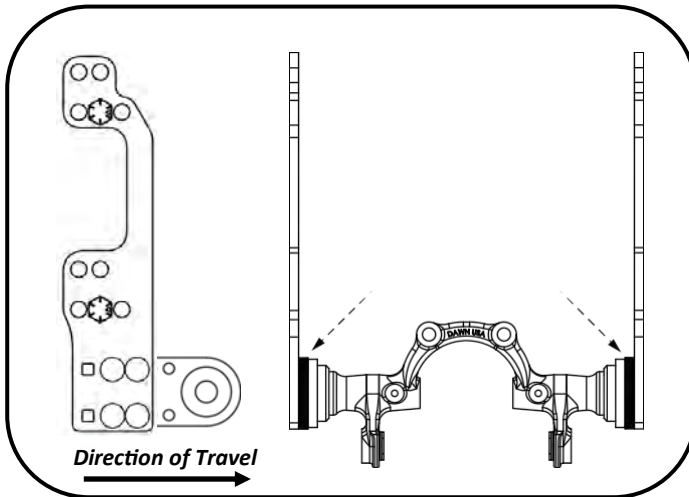


Figure 4.10:

John Deere (WIDE) 13.5" row unit width with 3/8" spacers between GFX yoke and mounting plate. SurePoint kit #: 561-03-100200

Figure 4.11:
DB toolbars with 11.5" John Deere planter row unit width use NO spacers between GFX yoke and mounting plate. SurePoint kit #: 561-03-100550

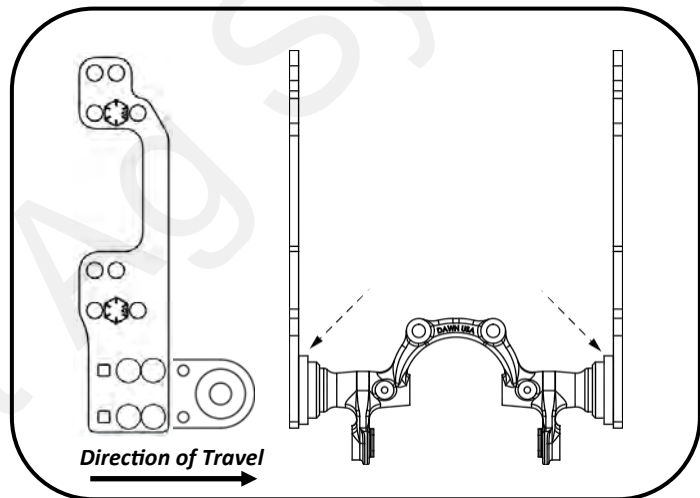
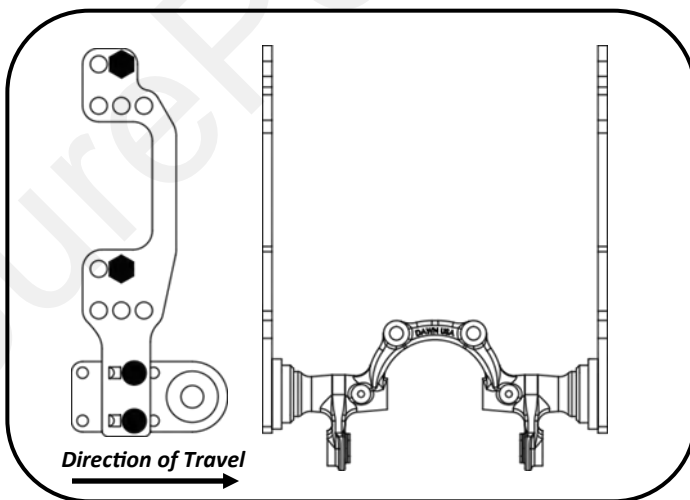


Figure 4.12:

John Deere units with long parallel links.



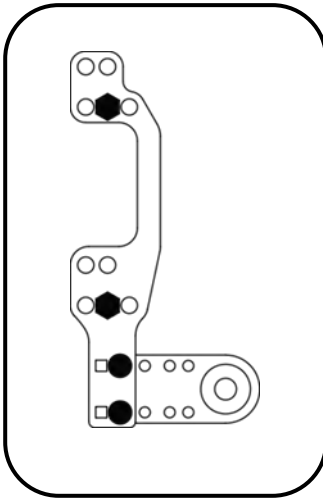


Figure 4.13:
For John Deere units with 14\"/>

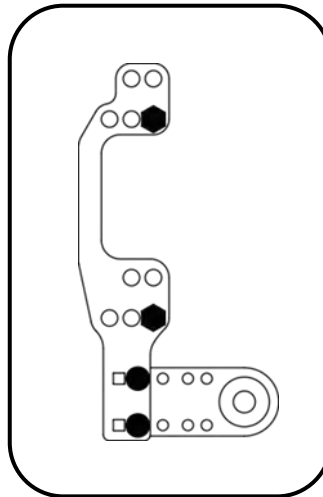


Figure 4.14:
1770NT middle rows where plate is welded under toolbar.

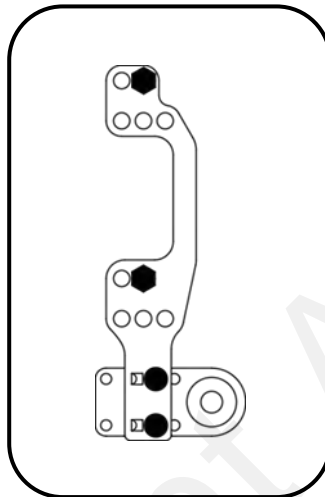


Figure 4.15:
For DB toolbar rows near gauge wheel weldments.

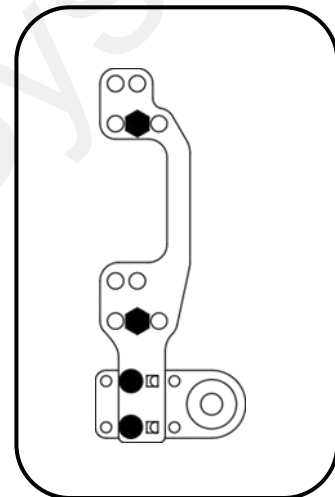


Figure 4.16:
For John Deere units with heavy duty scrapers.

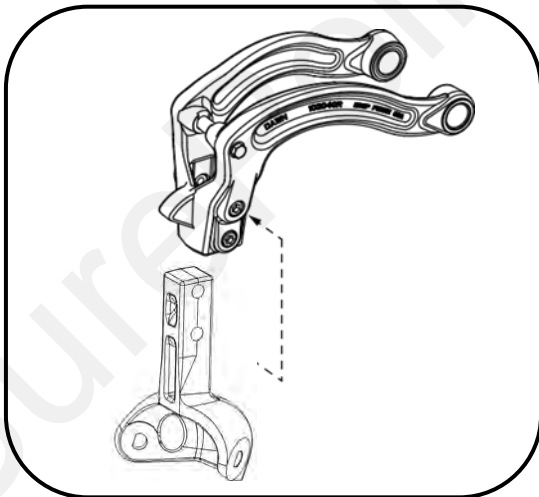


Figure 4.17:
For instances where attaching the mounting plate lower in relation to the toolbar is needed, you can mount the stem higher using only one bolt to mate the bottom hole of the stem to the top hole of the GFX arm.

NOTE: The diagrams compiled represent *SOME* of the most common configurations. Your specific planter may need a mounting configuration not mentioned in this guide. Please call SurePoint for interferences not provided in this document.

Installation—Mount Plates

Universal Mount Plate Installation

IMPORTANT! Before attempting installation, read the previous sections of this manual outlining spacer kits and bolt configurations for proper mounting information. As a general rule, planter manufacturers differ in their dimensions and will require different spacers and bolt configurations.

Note: Installation of the mounting plates/row units is best performed with the toolbar in planting positions on a level floor inside a shop. Individual preference may vary.

Note: Consider working on only one side of the row unit at a time to avoid fully detaching unit from frame. Setback rows will require full removal.

1. Remove pressure from down force springs and/or air bags attached to row units. See OEM manual for instructions.
2. With planter row unit properly supported, remove parallel link bushing bolts one side at a time. If you are installing a setback kit, remove all four parallel link bolts and move row unit back three (3) inches to accommodate setback plate.
3. Bolt GFX mounting plate according to the previous sections outlined in this manual. Pay attention to OEM bushing and hardware placement.
4. Repeat process for all bolts on parallel links. Do not fully torque bolts until final stage of assembly.

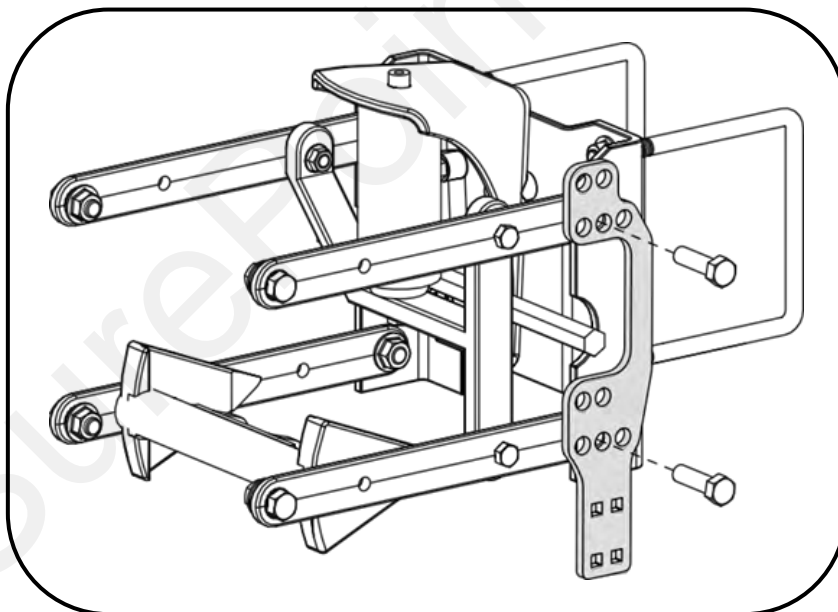


Figure 4.18:

CAUTION! Refer to bolt configurations section of manual to identify proper placement of bracket

WARNING! Pinch Point

Installation—Yoke and Cylinder Assembly

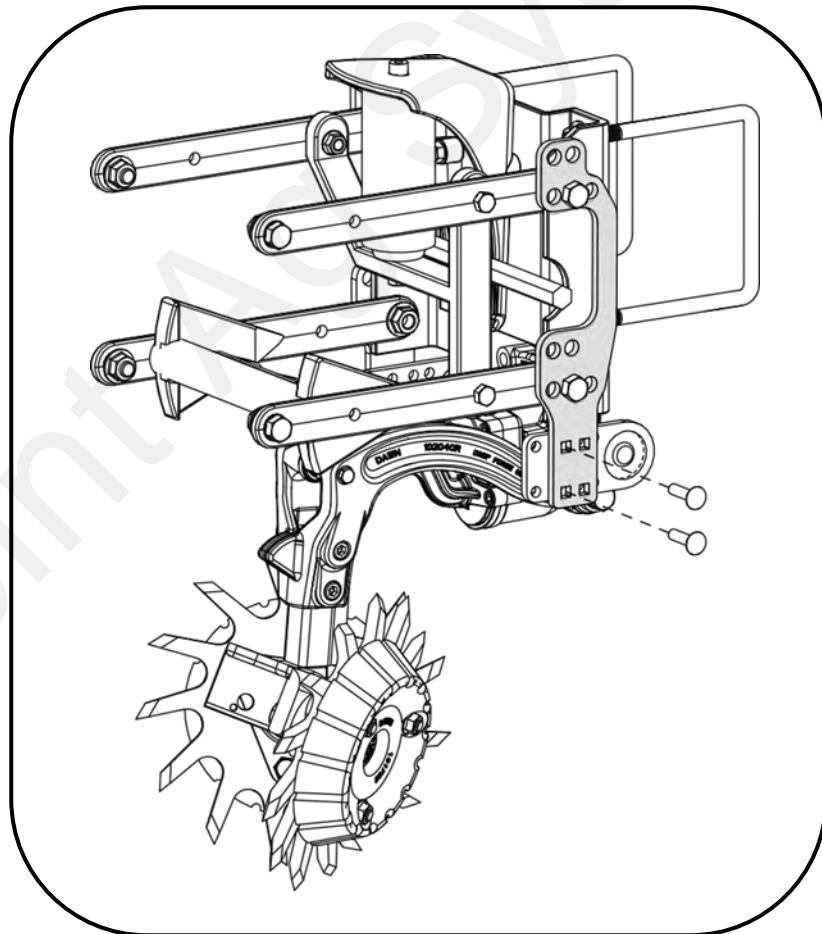
GFX Yoke and Cylinder Assembly Installation

Once mounting plates are installed, the cylinder assembly can be attached to the planter. Refer to the bolt configuration section of this manual for proper bolt placement and yoke attachment.

CAUTION! Do NOT remove caps from hoses until necessary.

Note: Check that your row units are uniformly spaced before making any drastic changes to GFX mounting configurations. Some interferences may be avoided in this way.

CAUTION! Refer to bolt configurations section of manual to identify proper placement of bracket



Mounting plate bolt torque specifications
 All 7/16" GR5 bolts are to be torqued to 70 ft-lb
 All 5/8" GR8 bolts are to be torqued to 180 ft-lb

Pre-Installation—Trashwheels and Depth Bands

Trashwheels Assembly Information

The position of the wheels and optional depth band attachments will drastically change the performance of your SurePoint trashwheels. Please review your options and discuss them with an authorized SurePoint dealer before installation.

Offset vs Intersecting

In general, row cleaners should only be put in the intersecting position if there is a specific reason to do so. If a very aggressive row cleaning is required such as where the planter is being run directly over the top of the previous years corn stalk, intersecting 14" trashwheels may be a good option. For most no-till applications, it is not necessary to run your SurePoint trashwheels in the intersecting position. In conventionally tilled ground, intersecting wheels can result in plugging problems. Only 14" wheels with straight teeth can be set to the intersecting position. 12.75" and 15" wheels MUST be set in the offset position.

Note: For most applications, an offset configuration is preferred.

Depth Bands

For most growers the default configuration of the GFX unit includes the molded poly depth band. The depth band acts as a gauge to keep the trashwheels from becoming too aggressive. In some heavy residue conditions it will be better to remove the depth band in order to increase the aggressiveness of the trashwheel. If you are no-tilling into heavy corn stalks and the unit is not moving as much residue as you want at maximum hydraulic pressure, the first thing to do is remove the depth bands. The depth bands limit the amount of tooth that is exposed and in some cases the field residue is thicker than the length of exposed tooth of the trashwheel.

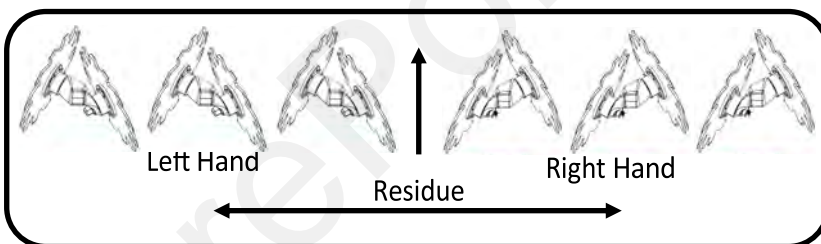
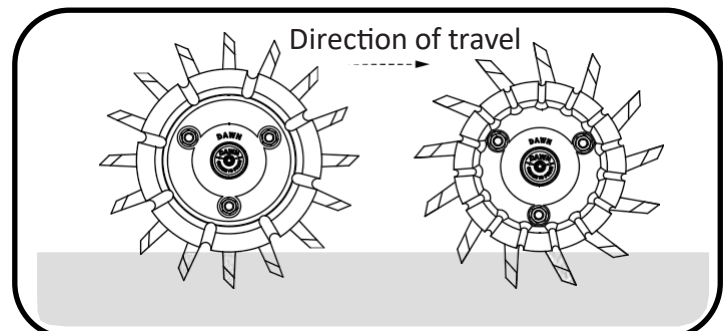


Figure 4.20: To funnel residue outward from the center of the planter, assemble half of your trashwheels in the left handed configuration and half of your trashwheels in the right handed configuration.

Figure 4.21: Trashwheels are directional. Proper installation requires the trashwheels to be assembled with tines sweeping back from direction of travel.



Installation—Trashweels and Depth Bands

Note: Most shipments come assembled by SurePoint (trashwheel, hub and depth band assembly). If your trashwheels have been shipped already assembled, feel free to skip this procedure.

- 1) Lightly grease O-ring and place into groove on the underside of aluminum supercap. Do not install pipe plug until very end.
- 2) To assemble trashwheel with depth band, insert each bolt through the hub flange, trashwheel, supercap, depth band, and loosely thread on nut. Repeat for all bolts.
- 3) Once all nuts are threaded onto bolts, tighten down making sure not to crack depth bands.
- 4) After all trashwheels are assembled, clamp a stem weldment into a bench vise by its square tube.
- 5) Attach assembled trashwheels to stem weldment by inserting bolt through washer, stem weldments and into trashwheel hub.

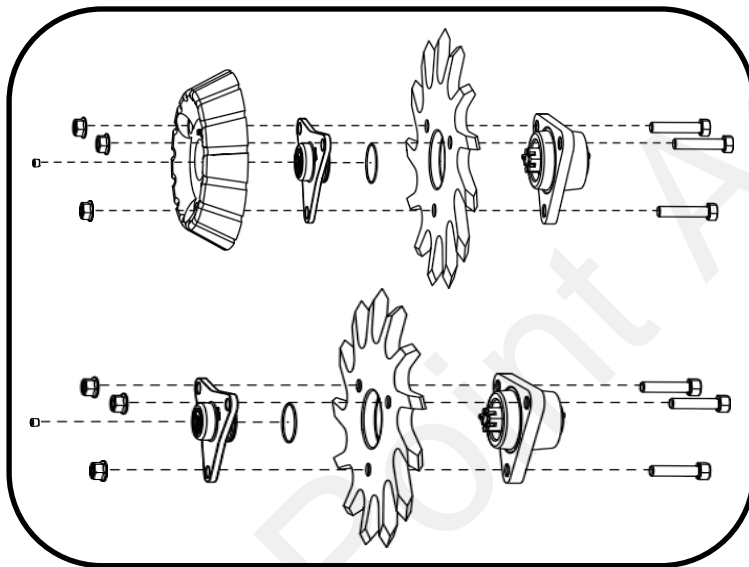


Figure 4.22

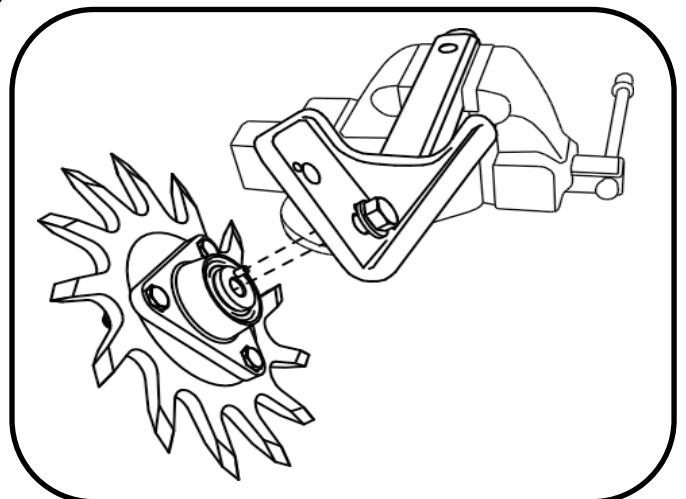


Figure 4.23

Installation of Stem Assembly

Once trashwheels are assembled and installed on the stems, you can install them into the arm weldments of the GFX primary row unit structure.

- 1) Slide stem assembly into the receiver tube of the GFX swing-arm assembly. Stem will have a bit of play in receiver tube and fit loosely.
- 2) Insert upper bolt to retain assembly. Thread nut onto upper bolt and tighten down securely. Repeat with lower bolt and nut.
- 3) Thread on and tighten jam nut to secure retention bolts.

Note: If you are in loose worked ground or terraced areas you can raise stem for less aggressive row cleaning action. (Fig 4.25)

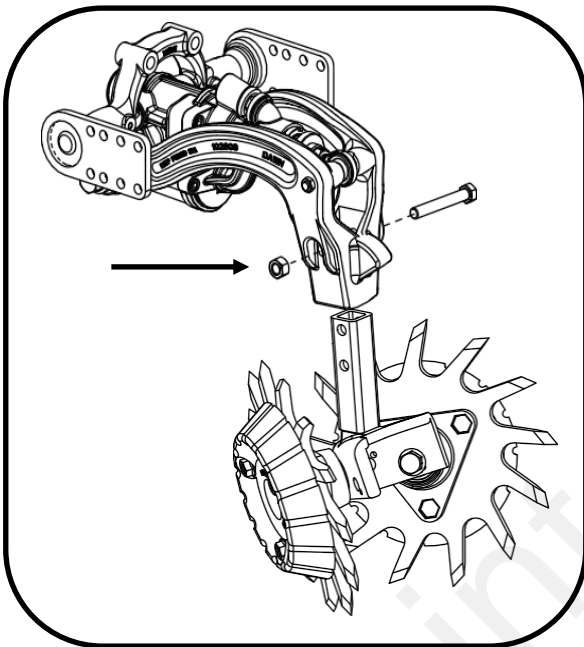


Figure 4.24: Due to forging die wear, you may need to insert a flat-head screw driver to secure nut when tightening.

Stem retainer bolt torque specifications:
Tighten 1/2" GR8 bolts to 125 ft-lb.

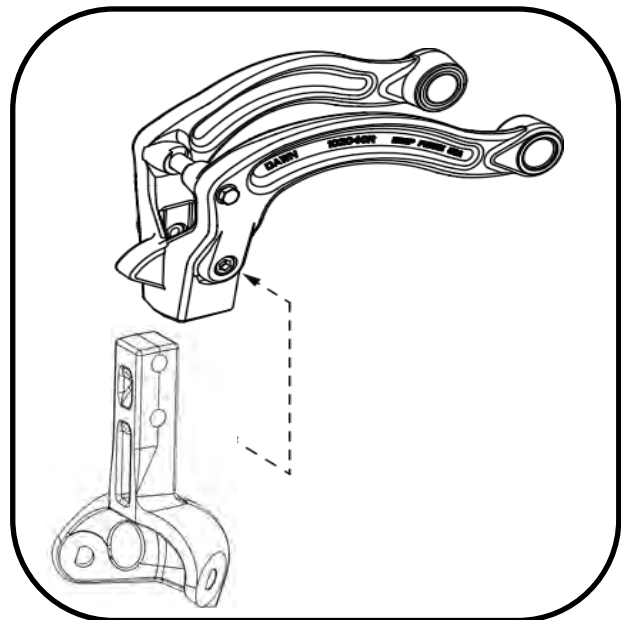


Figure 4.25

Hydraulic Circuit Assembly and Routing

Hydraulic Circuit Assembly

SurePoint hydraulic systems use multiple standardized connections which are non-interchangeable. It is important to recognize each component to determine a proper connection to avoid death, personal injury and/or property damage.



CAUTION! Many planters require special considerations for hydraulic line routing. If a custom hose is needed use only CE approved SAE 100R2 hose with minimum operating pressure of 3000 psi. Daisy chain hoses should be a 1/4in hose using Parker or equivalent –4 ORFS (O-ring face seal) hose ends. SurePoint does not accept any liability for the performance of hoses made by a 3rd party.

Pressure Specifications

When installing or assembling hydraulic fittings and hoses, it is important to use fitting and hoses that are rated to at least the maximum published pressure of the hydraulic circuit. Refer to your tractor/hydraulic pump literature to determine this pressure. Analog gauges cannot be used to accurately measure surge or peak pressures as they represent an average.

Hydraulic Circuit Routing

Hose routing is extremely important in order to prevent premature component failure due to flow restriction from heat deformation, kinking, twisting, etc. This guide will provide some basic hose routing recommendations to avoid common problems. Due to the varied nature of planters and tractor configurations, some common sense must be used to determine optimum hose routing options.

Hose Length

Hose length will vary depending on motion absorption, pressure variants, restraints/supports and machine tolerances. Always run a hose slightly longer than the actual difference to account for these conditions.

Securing Hoses & Physical Stress

In certain instances, retaining, securing and preventing hoses from damage by kinking, frame interference or twisting will be necessary. It is important to ensure that this process does not add a point of stress or wear on the hose. Excessive flexing, twisting, kinking, and tensile/side loads, acute bend radius, and vibrations can significantly reduce the life of the hose or in some cases lead to premature failure if the hose is not secured properly. Any hose that is kinked or cracked before installation must be discarded.

Environmental Conditions

Environmental wear from ultraviolet radiation/sunlight, heat, ozone, moisture, salt, chemicals and air pollutants can cause premature wear and lead to failure if not replaced.

- ⚠ WARNING!** Though JIC, ORB and ORFS hydraulic fittings are incompatible and should not fit together, ALWAYS make sure you use appropriately matched male-female connections.
- ⚠ WARNING!** Do not use “attach under pressure” quick couplers. The SurePoint GFX stores hydraulic energy. It is dangerous to keep stored energy in the circuit when detached for storage.
- ⚠ CAUTION!** To maximize the life and operational consistency of your hydraulic units, take care to reduce likelihood of contamination of the hydraulic circuit. Leave caps on unused hydraulic hose ends and fittings. When installing, wipe a small amount of hydraulic oil on the O-ring prior to assembly of a connection.

Control Valve Components

Familiarize yourself with the location and function of each component on your GFX hydraulic control valve. Refer to parts breakdown for specific part numbers.

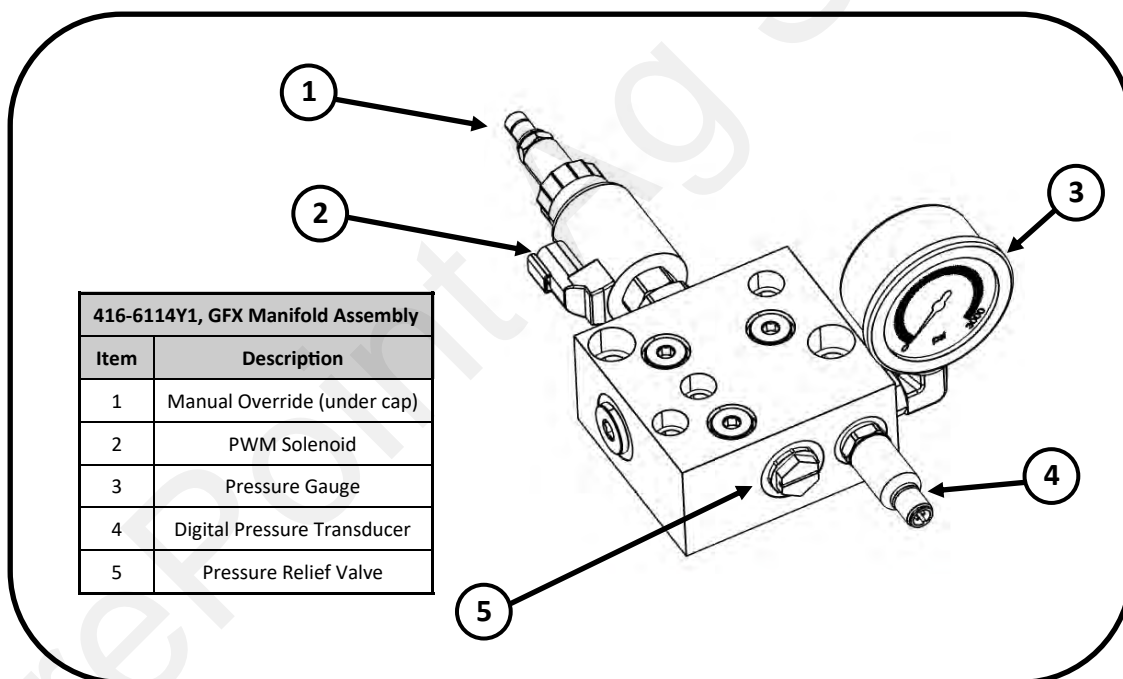


Figure 4.26: 416-6114Y1, GFX Manifold Assembly

Hydraulic Valve Stacking and Alignment

Valve Stacking & Attachment

Stacking valves for multiple sections can reduce the number of hydraulic tractor ports being used. With the valves properly attached, only one set of positive pressure and return flow ports per stack are connected to the tractors' SCV ports. All valves will need to be wired independently for individual control.

Note: *If you are not stacking valves, proceed to step four (4).*

- 1) Use 1/4" allen key to remove port plugs on the top and/or bottom of the control valve bodies. (Fig 4.27) Only remove plugs from ports you plan to connect.
- 2) Lubricate O-ring with clean hydraulic fluid and place in open port. (Fig 4.28)
- 3) Place control valve bodies in position and secure with appropriate length 3/8" hex head cap screws and nuts. Torque to 100 ft-lb. (Fig 4.29)
- 4) Once your valve stacks are assembled and secured, attach them to the planter using two, 1/2" socket head cap screws of appropriate length. (Fig 4.30)

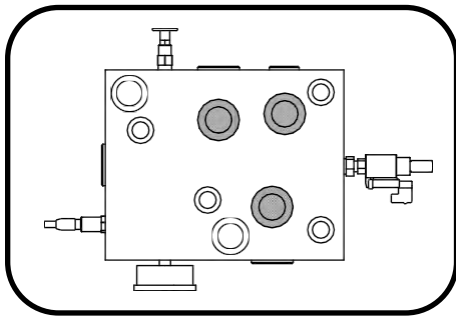


Figure 4.27

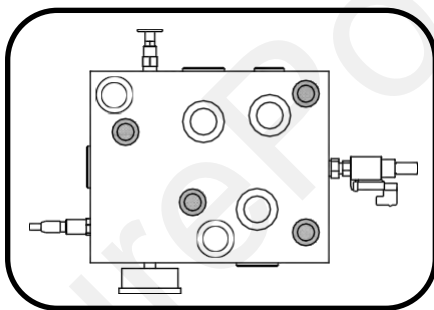


Figure 4.29

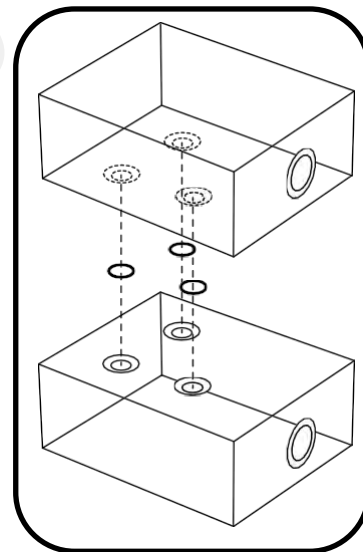


Figure 4.28

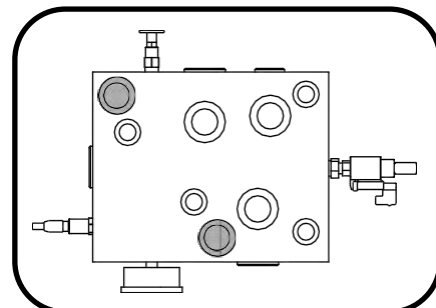





Figure 4.30

Control Valve Setup and Plumbing

Hydraulic Control Valve Plumbing

Typically the valve will be mounted on the tongue of the planter at the bulkhead so that it is not permanently tied to the tractor. The gauge should be installed so that the tractor operator can see it from their seat. Quick electronic couplers with dust shields are provided for safe storage of your planter. The following guide will help to identify the ports and connections on your hydraulic control valve(s).

Note: *It may be possible to attach the PRESS and RTN ports to a Tee fitting in order to tie it in with Variable Rate Drive by slightly increasing the flow rate. It will NOT be possible to tie into a Variable Rate Drive that utilizes load sensing. SurePoint recommends using a dedicated remote for GFX tools.*

-  **WARNING!** *Do NOT tie SurePoint GFX tools into a line running greater than 20 gpm of flow. Doing this will damage the valve.*
-  **CAUTION!** *Do NOT operate the circuit without at least one TANK drain line connected. Operation of the control unit with the TANK drain line plugged will damage the control valve.*
-  **CAUTION!** *If you are using a power beyond port, you will need to source a needle valve to control flow as these ports are not regulated and will damage the SurePoint control valve. When adjusting the needle valve, slowly open the valve until “whistling stops.”*

Hydraulic Control Valve Plumbing—Cont.

1. Quick Couplers, connect to tractor hydraulic remote here.
2. Hydraulic control valve assembly. Mount to tongue of planter using (item 3)
3. Valve mount assembly kit (P/N: 417-6115Y1)
4. Hydraulic 'Draft' hose. This item comes uncrimped and will need trimmed and assembled depending on length needed.
5. Install Row to Row Hyd kits here
6. Bleed valves. Mount these on the outside end of each side of the planter.

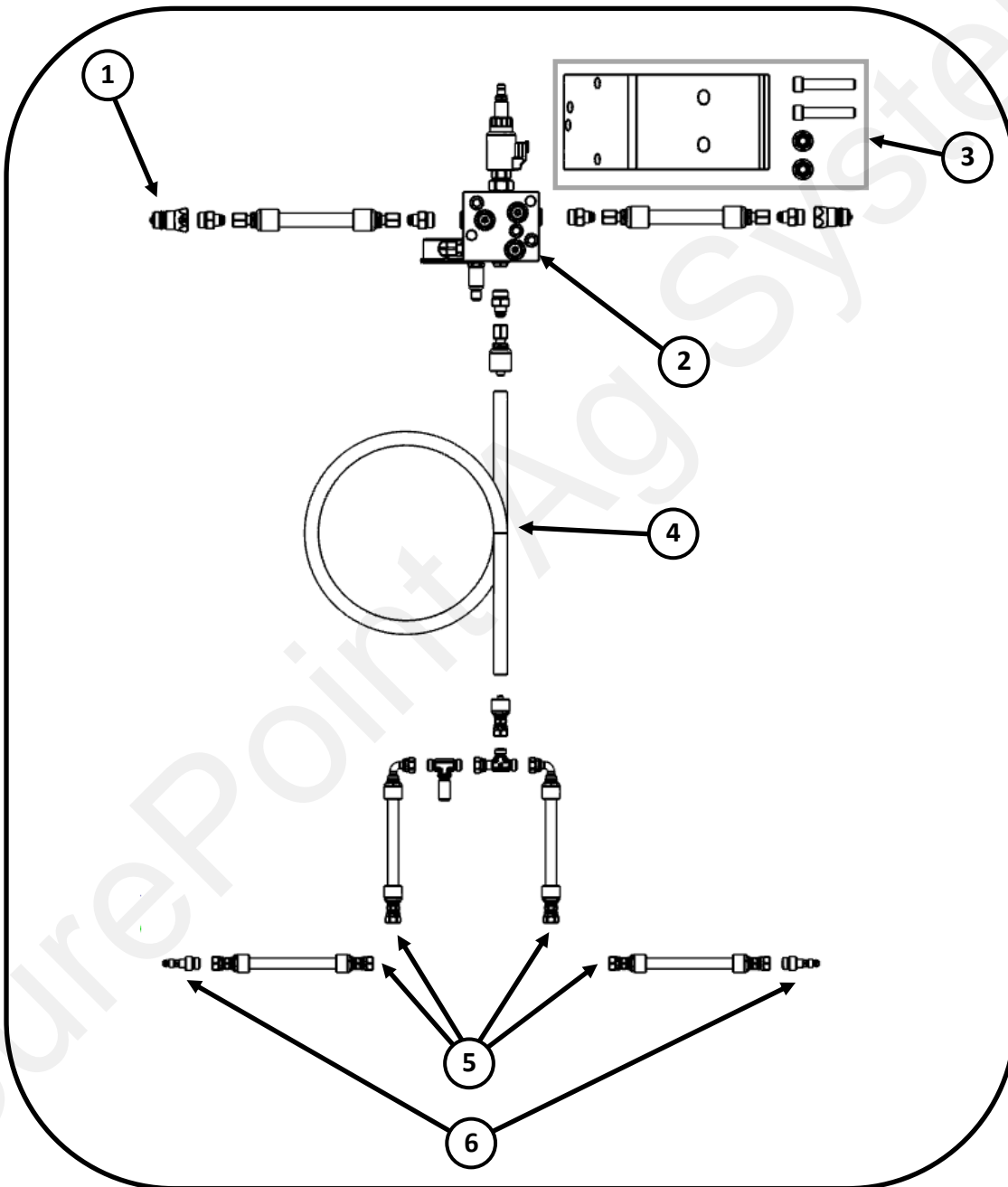


Fig 4.31

Hydraulic Hose Routing and Attachment

Hydraulic Draft Hose

A hose will need to be made to run from the control valve's PLTR port, down the length of the draft tube to the end of the daisy chain of row units. This will be standard 3/8" SAE 100R2 hose with a minimum operating pressure of 3000 psi.

Hydraulic Hose Routing Around Frame Pivots

It will often be necessary to break with the simple daisy chain of hydraulic routing between row units around the pivoting joints in the frame. Usually it is only necessary to do specialized hydraulic routing around the joints where the toolbar folds.

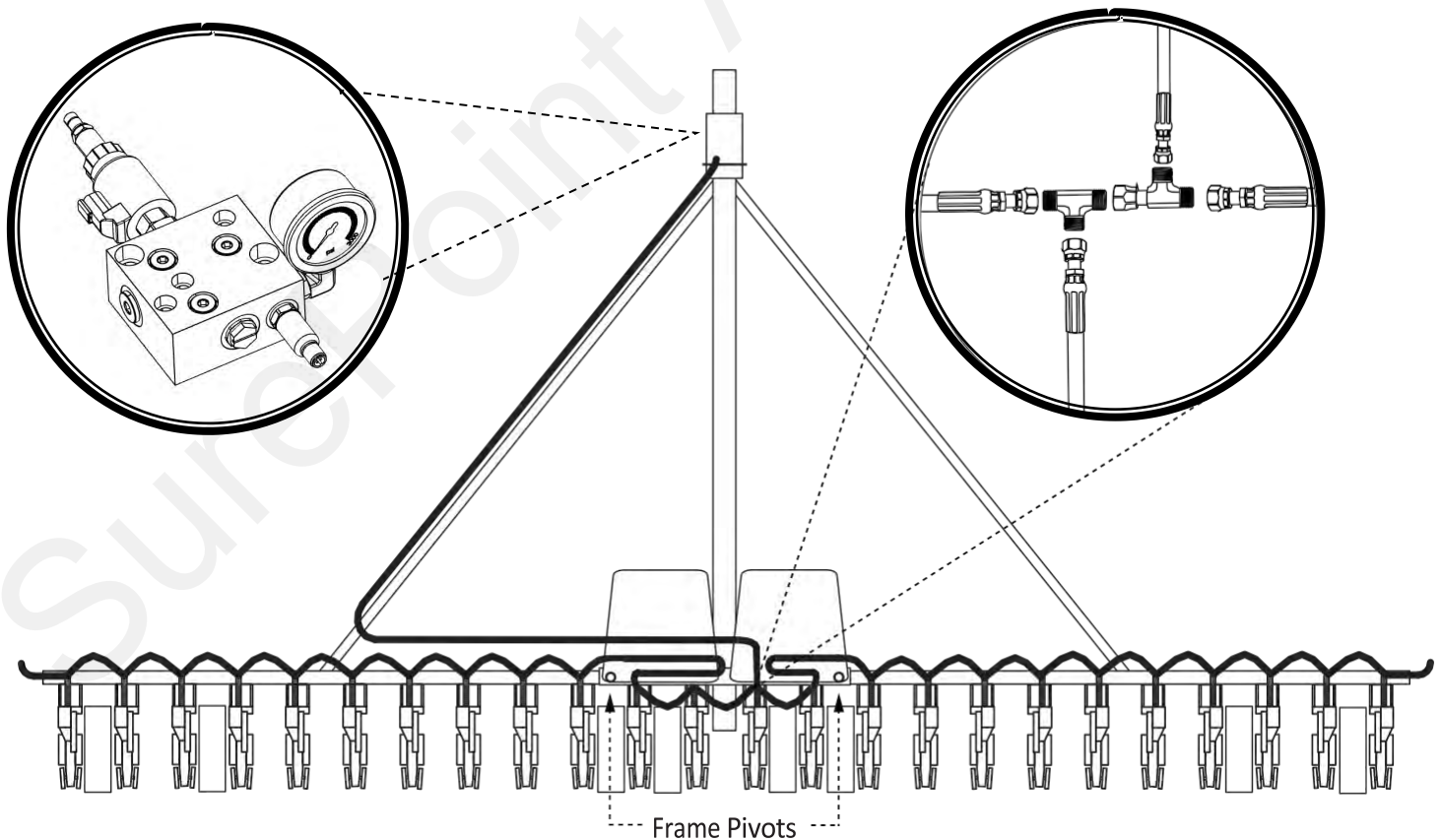
Minimum Bend Radius

To achieve optimum hose routing and avoid hose or circuit failure through kinking, stress or other flow restrictions, setup and installation must adhere to a minimum bend radius which does not kink the hose. If the hose is kinked during assembly or installation, the hose must be discarded.

Bleed Valves

Each control section needs at least one (1) bleed valve located at the furthest point from the valve on the daisy chain. When plumbing into the middle of a daisy chain, bleed valves are necessary at each end of the daisy chain.

Note: All daisy chain connections are -4 ORFS

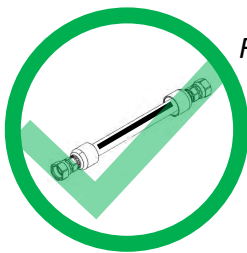
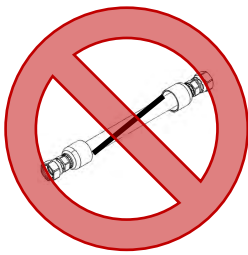


Connecting Row-to-Row Hydraulic Hoses

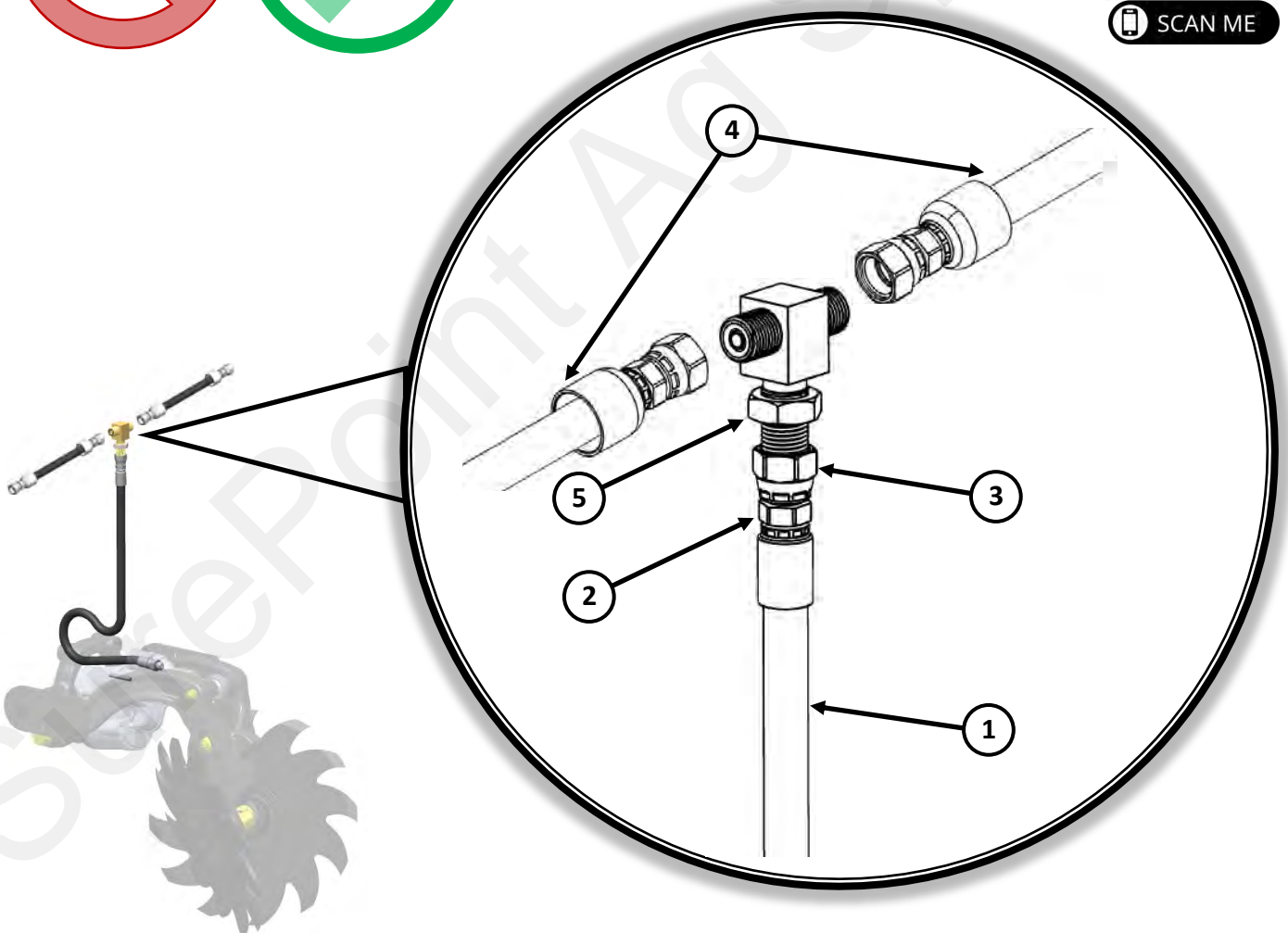
Careful attention is needed when routing and tightening the hoses and Tee fittings at each row unit.

1. Start by routing the hoses with no sharp bends, kinks, or obstructions. Thread everything together but ensure all fittings are still loose.
2. Hold the cylinder hose (1) with a 9/16" wrench on the small hex (2), and use an 11/16" wrench to tighten the large hex (3) until tight.
3. Repeat the same steps for each row-to-row hose (4), ensuring there are no kinks or twists in those hoses.
4. Next tighten the tee jam nut (5) against the bulkhead bracket.

Note: Use printed line or text on the hydraulic hoses to help align them and prevent twists and kinks. Straight line is good.



For more information scan the QR code to view an instructional video!



Connecting Multiple Sections

Once your valve stack is assembled, plumb one (1) control valve to the tractor’s hydraulic port (PRESS, RTN, & TANK).

Note: Read your tractors manual or contact the manufacturer for details concerning hydraulic port size, connections, and flow.

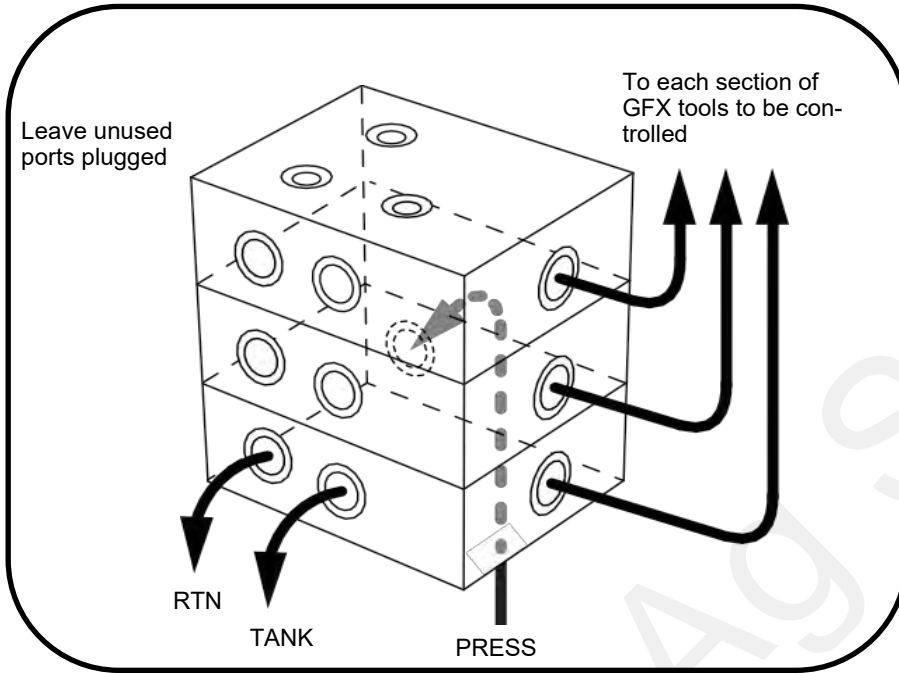
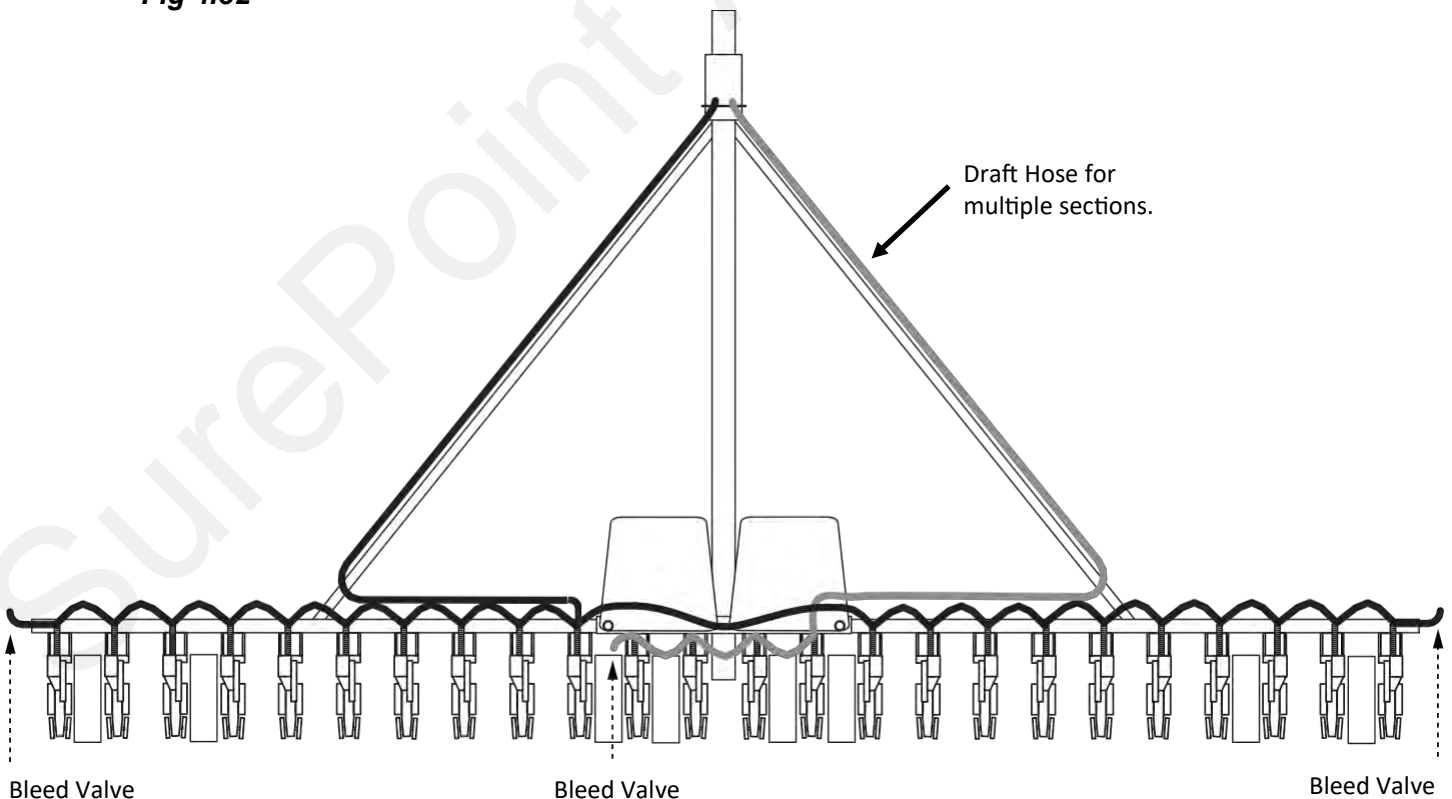


Fig 4.32



GFX Icons

GFX VT Icon Definitions



Figure 5.01: GFX “Home” icon—returns to the main run/home screen.

Figure 5.02: Next Page Icon—toggles to the next page.



Figure 5.03: Last Page Icon—toggles to the most previous page.

Figure 5.04: Software Icon—shows the software version and Serial Number.

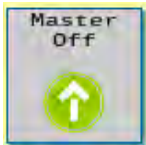


Figure 5.05: Master ON/OFF Icon—toggles master switch, or shows ON/OFF status.

Figure 5.06: Next VT—when more than one display is in use, this moves the GFX to the next screen.

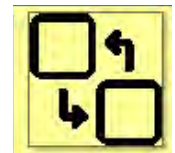


Figure 5.07: Save to this VT—when more than one display is available, this saves GFX as the current display.

GFX VT—John Deere G5

Home Page

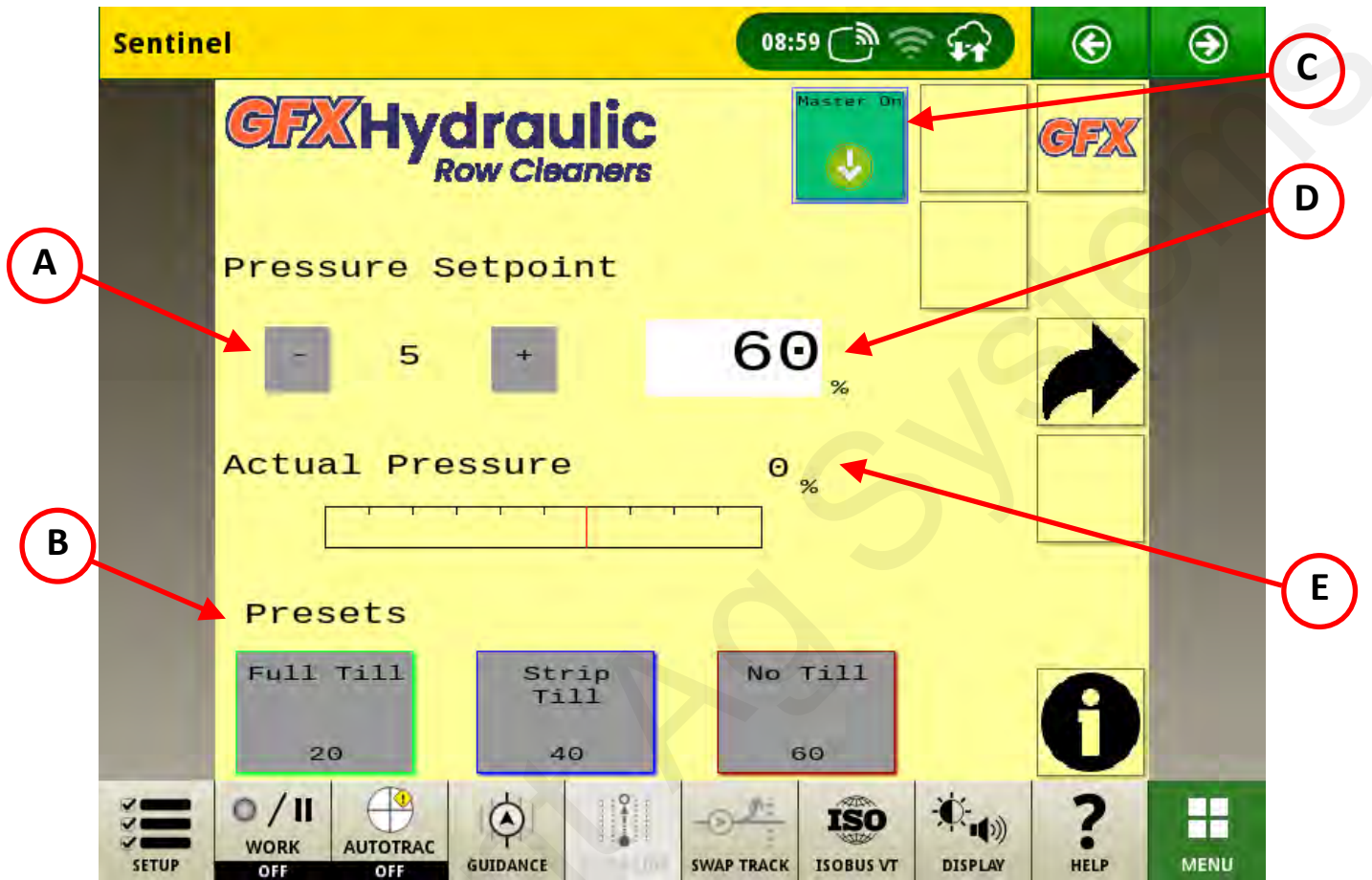
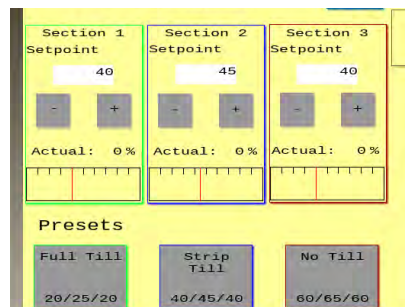


Figure 5.08:

- A) Adjustment—Press - or + to decrease or increase pressure setpoint. This will change in the numeric increment shown. This increment can be changed in the adjustment box on the 'Settings' page, see figure 5.15.
- B) Presets—Press desired preset as a quick change to set the pressure setpoint. To add or modify, go to the 'Presets' page, see figure 5.10.
- C) Master On/Off button—this will be GREEN when system is ON or down, or GREY when system is OFF or up. To change master switch options go to 'System start/stop options' page, see figure 5.13.
- D) Pressure setpoint—The current desired setpoint. Change this by clicking the box and typing desired setpoint. This will change when you toggle -/+ , or change to a preset.
- E) Actual pressure—The current actual pressure.

Figure 5.09: If multiple sections are activated, values will be available for each section setpoint, preset, adjustment and actual pressure. Home page will look like this.



Presets Page

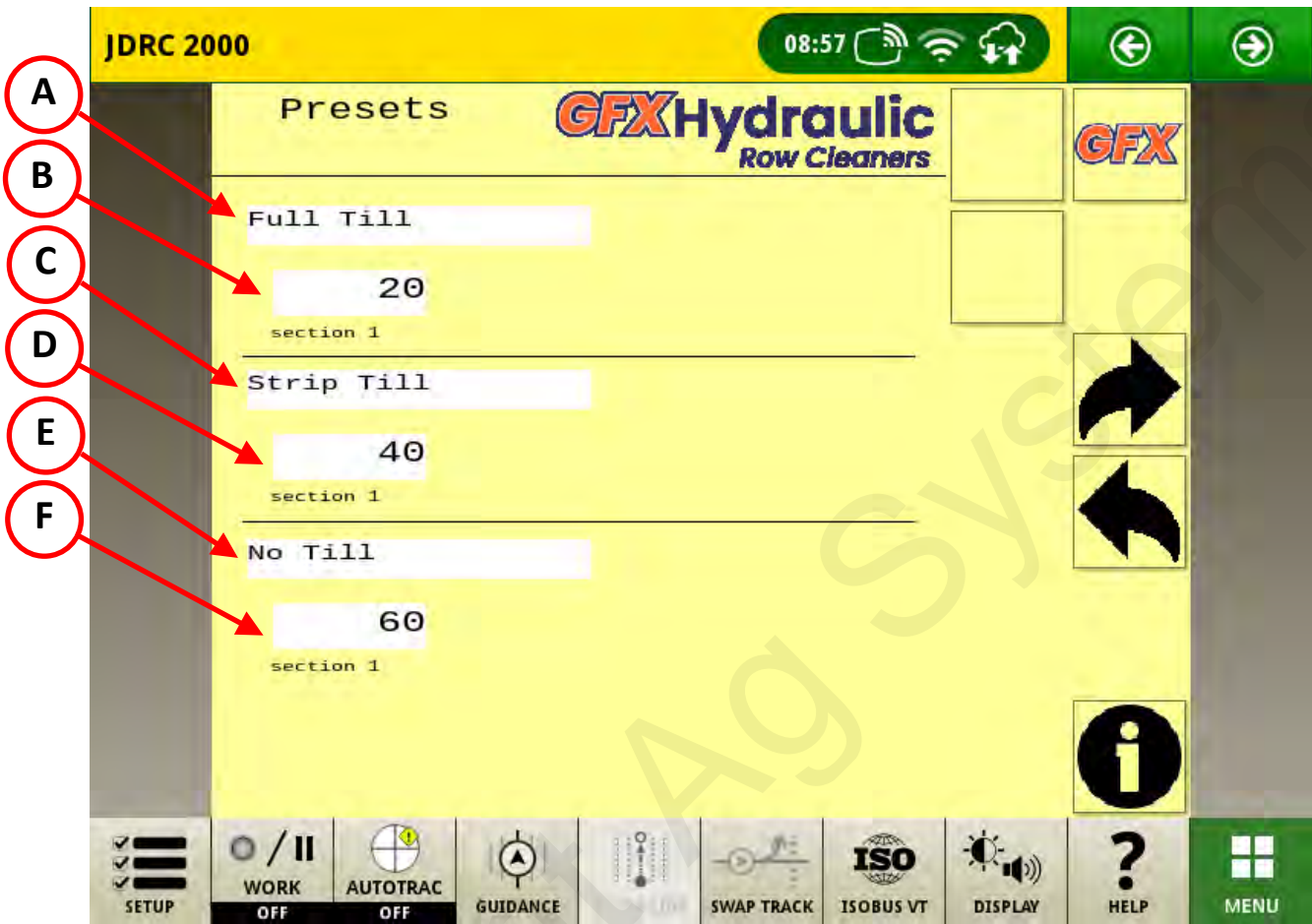
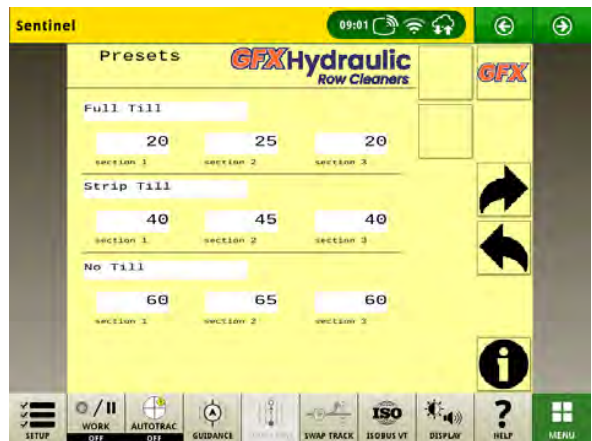


Figure 5.10:

- A) Preset #1 Title—Press this box and enter desired name for Preset #1.
- B) Preset #1 Pressure—Press this box and enter desired pressure value (%) for preset #1.
- C) Preset #2 Title—Press this box and enter desired name for Preset #2.
- D) Preset #2 Pressure—Press this box and enter desired pressure value (%) for preset #2.
- E) Preset #3 Title—Press this box and enter desired name for Preset #3.
- F) Preset #3 Pressure—Press this box and enter desired pressure value (%) for preset #3.

Figure 5.11: If multiple sections are activated, values will be available for each section and preset. Three sections shown here



Hardware Page

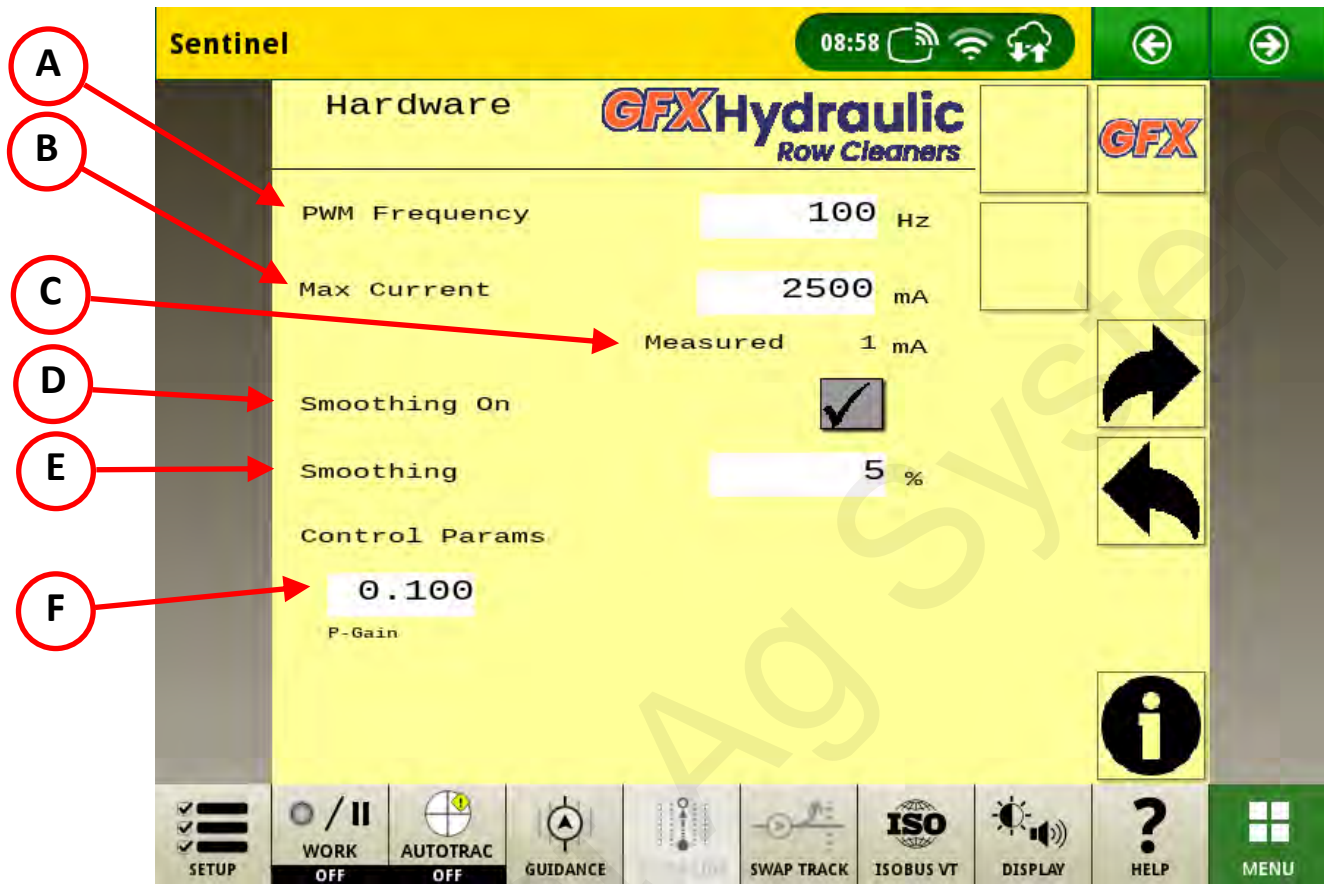


Figure 5.12:

- A) PWM frequency—Frequency signal of the hydraulic pump. Default is 100Hz.
- B) Max Current—The maximum load for signal. Default is 2500mA.
- C) Measured Current—Actual current measurement present (mA).
- D) Smoothing ON/OFF—Check this box to turn smoothing ON, uncheck for OFF.
- E) Smoothing adjustment—Press this box and enter the smoothing (%) setting desired. The lower the number, the more sensitive.
- F) Control Params—Value to set control speed of system parameters.

Note: Please consult SurePoint support team before modifying any hardware settings.

System Start/Stop Options Page

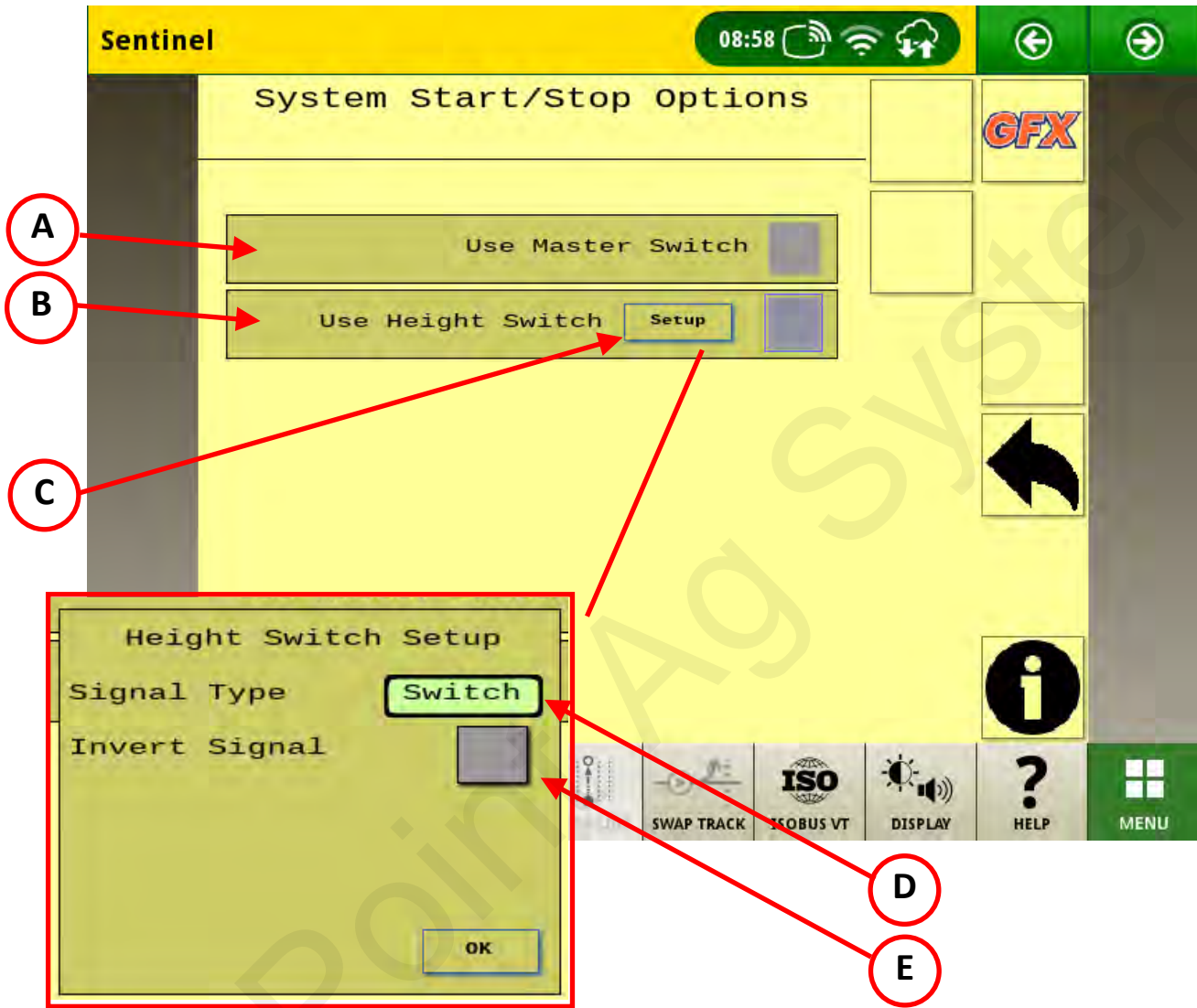


Figure 5.13:

- A) Use Master Switch—Check this box if using an external switch such as a foot pedal.
- B) Use Height Switch—Check this box if using a row mounted switch.
- C) Setup—Press this button to setup the height switch.
- D) Signal Type—Press the button to toggle between Switch and Sensor.
- E) Invert Signal—Check this box to invert the switch/sensor signal.

Cleanout Page

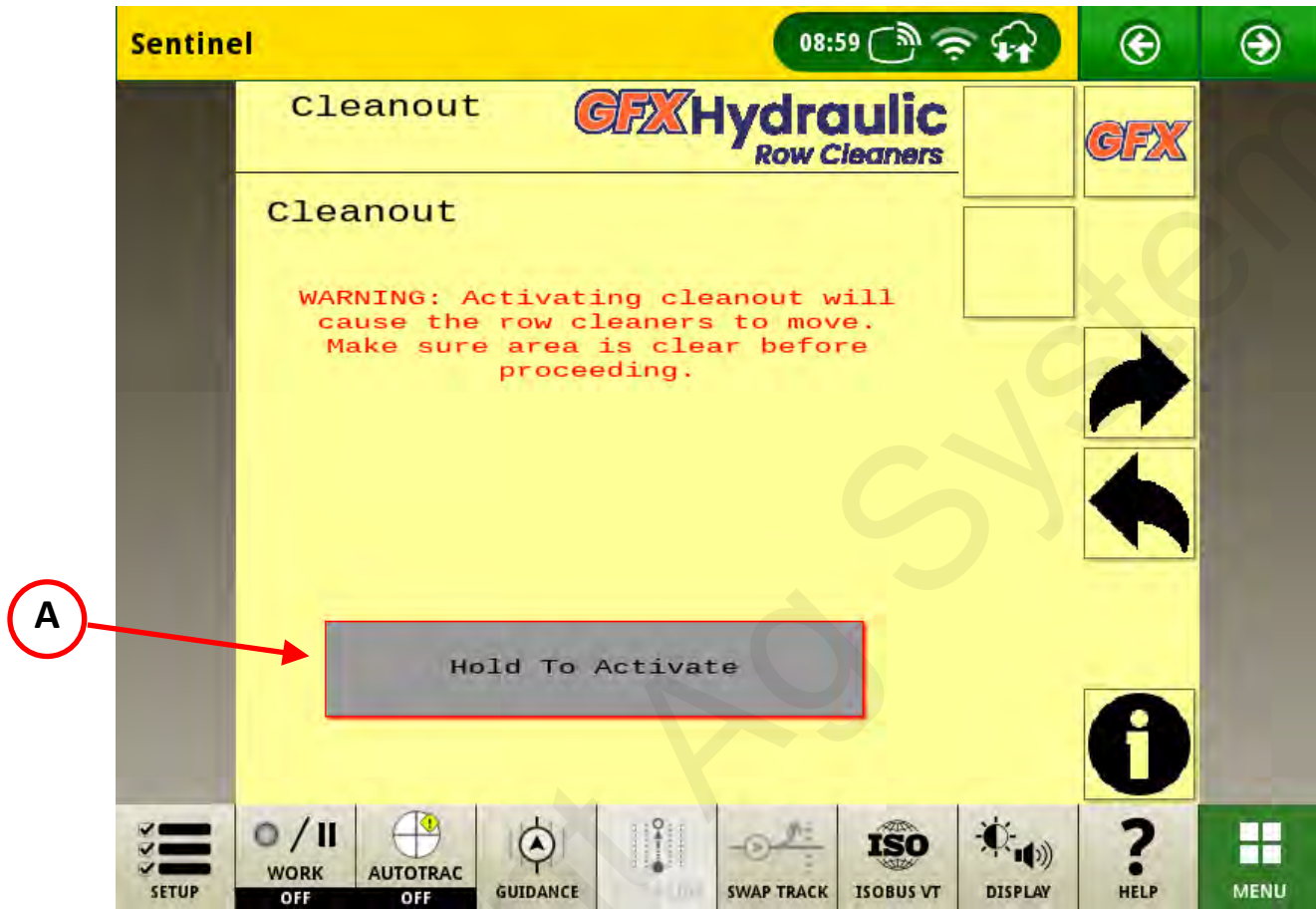


Figure 5.14:

A) Hold to Activate—This will activate the automatic bleeding function.

Note: See page 5-12 for cleanout instructions.

⚠ WARNING!—by pressing this button, hydraulics will turn on and row cleaners will move. Make sure area is clear and safe before activating.

Settings Page

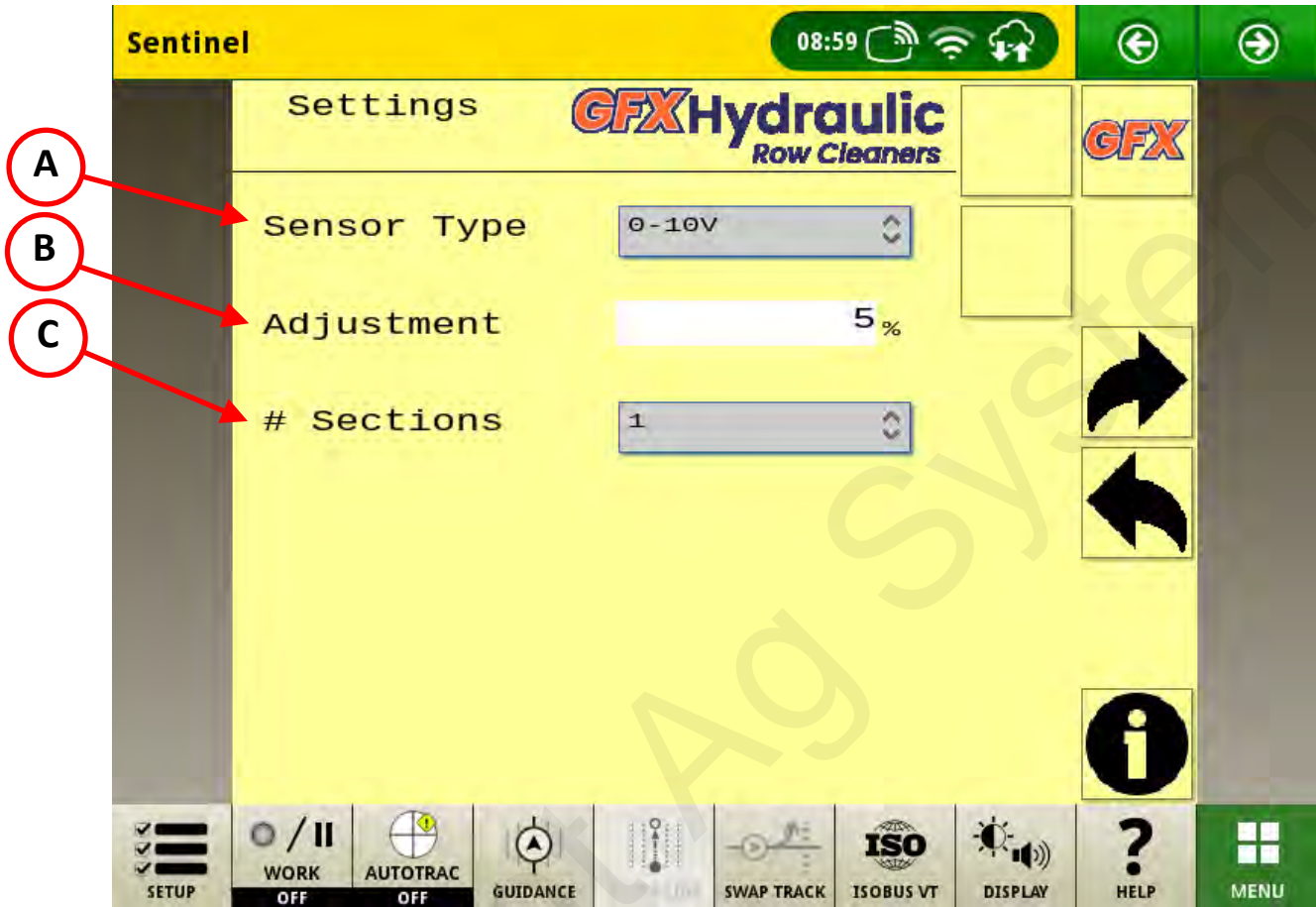


Figure 5.15:

- A) Sensor Type—Toggle between different sensor types. 0-10V is default for SurePoint sensors.
- B) Adjustment—This value is the incremental adjustment that sets the - and + buttons on the main screen.
- C) Sections—Select the number of sections (if applicable). One, two or three.

Note: Your GFX system may not be setup for multiple sections.

Software Page

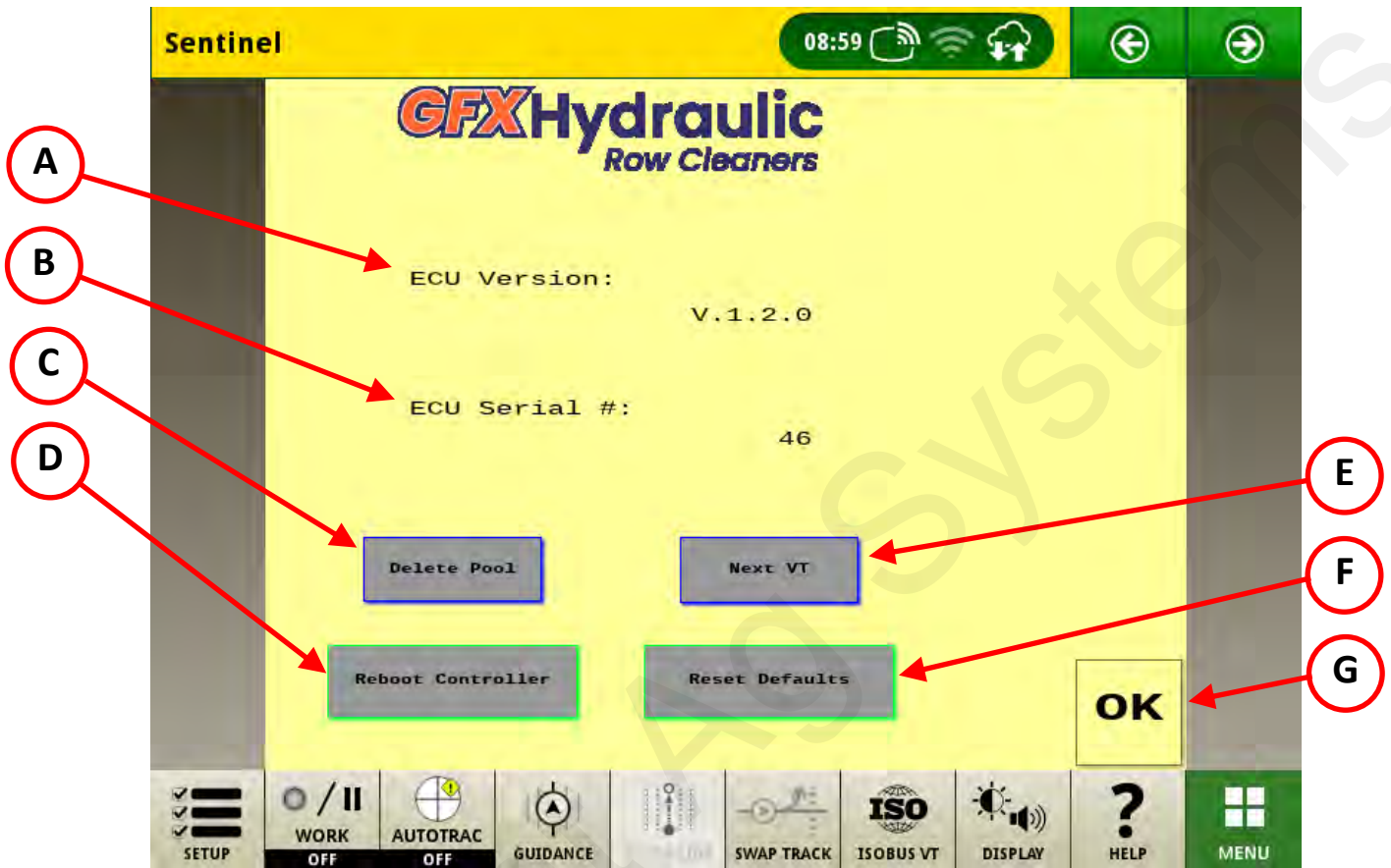


Figure 5.16:

- A) ECU Version—Displays current ECU software version.
- B) ECU Serial #.—Displays ECU serial number.
- C) Delete Pool—Press button to delete the GFX product from the VT pool.
- D) Reboot Controller—Press button to reboot the GFX controller.
- E) Next VT—Press button to toggle to the next VT (if applicable).
- F) Reset Defaults—Press button to change all settings back to factory default.
- G) OK—Press button to exit the software page.

How to get GFX on VT

How to get GFX on VT—John Deere Gen 4 Display

Press “ISO” to go to the ISOBUS VT screen.

Note: There may be more than one ISOBUS device connected.



Figure 5.17: “ISO” icon on John Deere Gen 4 display.

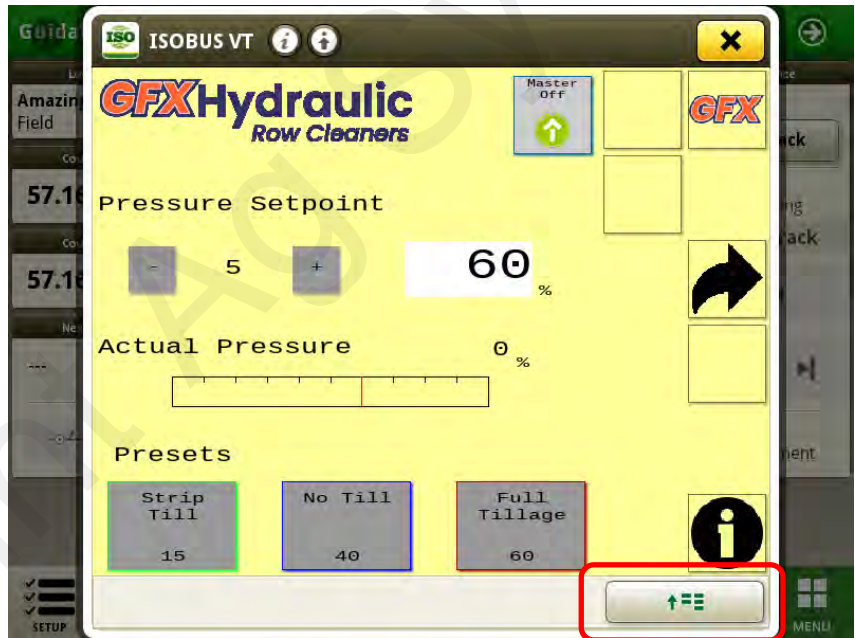


Figure 5.18: Press this button to view Connected ISOBUS implements

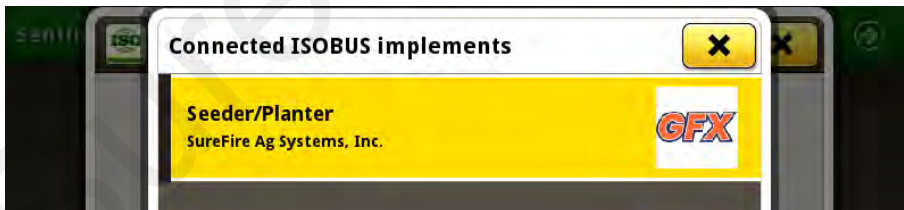


Figure 5.19: View of Connected ISOBUS implements.

Note: There may be more than one ISOBUS device connected.

Setup GFX on VT

How to Setup GFX on John Deere Gen 4 display

- 1) From the homepage press the next page button, (fig 5.20 item A) to navigate to settings page (fig 5.21)
- 2) Select the sensor type from the dropdown box (fig 5.21 item A) 0-10V is default for SurePoint sensor. Contact SurePoint Support before changing this value.
- 3) Press the Adjustment box to enter the desired value (fig 5.21 item B). This will change the increment shown on the home page to toggle - or + buttons.
- 4) Select the number of sections from the dropdown menu (fig 5.21 item C). Choose one (1), two (2), or three (3) sections. Only select the appropriate number of sections as your GFX system is equipped with.
- 5) Press next page to navigate to the Cleanout page.

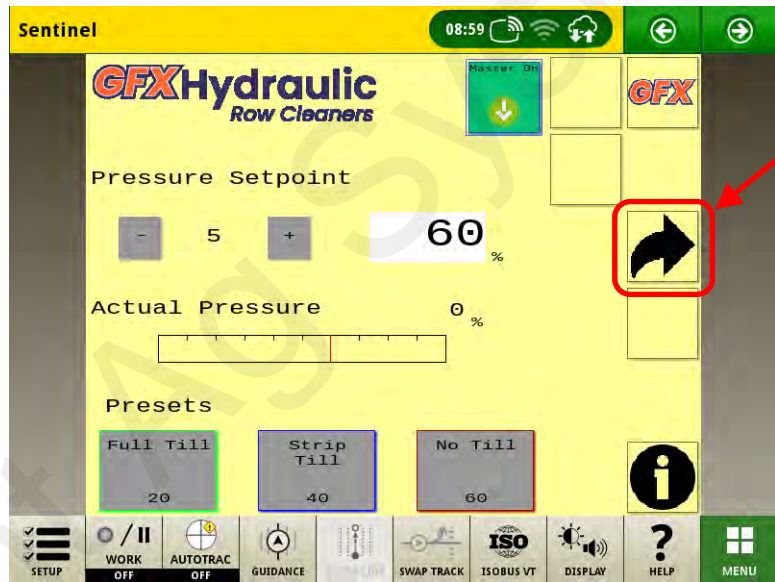


Figure 5.20

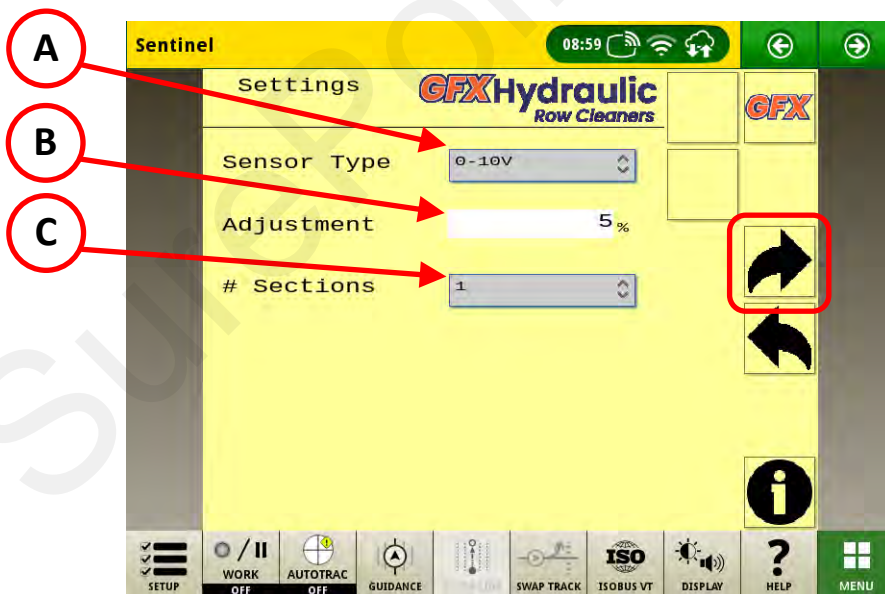


Figure 5.21

How to Setup GFX on John Deere Gen 4 display

- 6) The Cleanout page is to control the hydraulic pressure automatically so the system can be bled of any air. There is no setup required for this page. See the operations setup on page 5-12 for further instructions. **Note:** pressing this button will activate the hydraulic system, use caution.
- 7) Press the next page button, (fig 5.22 item A) to navigate to presets page (fig 5.23).
- 8) Preset #1 Title—Press this box (fig 5.23 item A) and enter desired name for Preset #1.
- 9) Preset #1 Pressure—Press this box (fig 5.23 item B) and enter desired pressure value (%) for preset #1.
- 10) Preset #2 Title—Press this box (fig 5.23 item C) and enter desired name for Preset #2.
- 11) Preset #2 Pressure—Press this box (fig 5.23 item D) and enter desired pressure value (%) for preset #2.
- 12) Preset #3 Title—Press this box (fig 5.23 item E) and enter desired name for Preset #3.
- 13) Preset #3 Pressure—Press this box (fig 5.23 item F) and enter desired pressure value (%) for preset #3.
- 14) Press next page to navigate to the hardware page. (Figure 5.23 Item G)

Note: If multiple sections are activated, values will be available for each section and preset. See Figure 5.24.

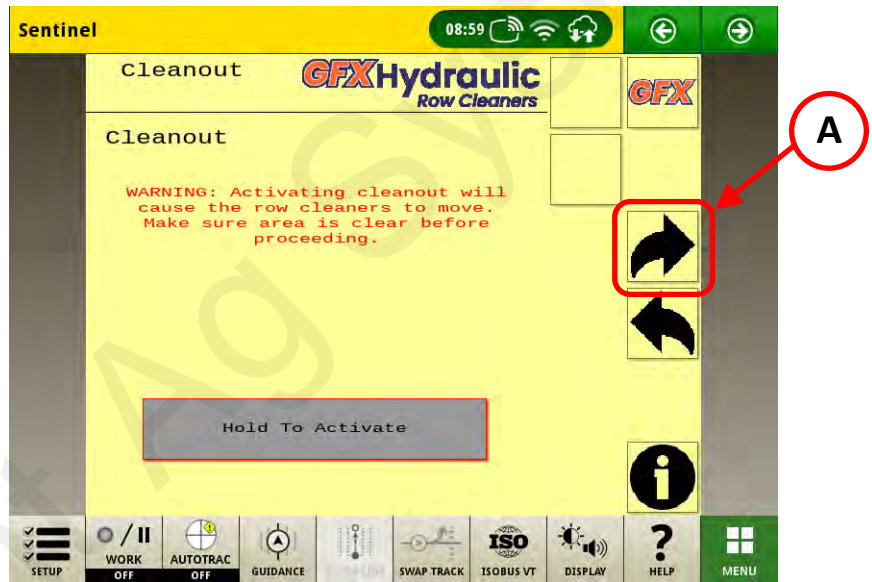


Figure 5.22

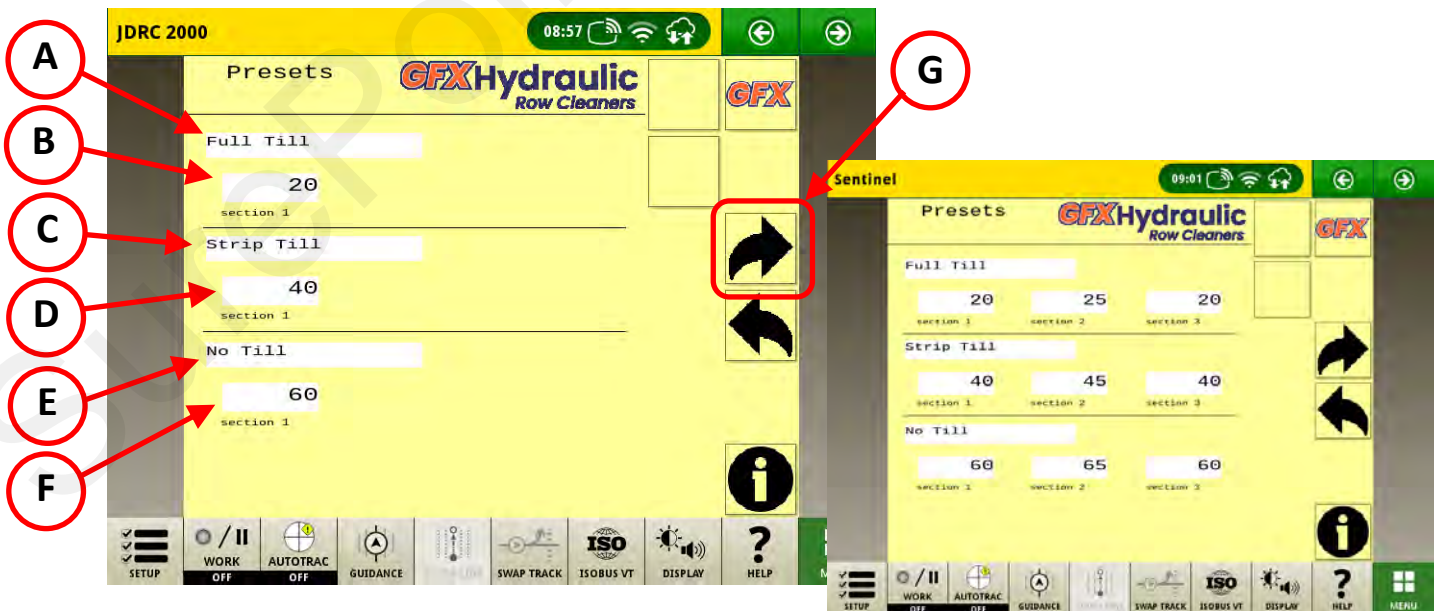


Figure 5.23

Figure 5.24

Operation of GFX Unit

Flow Rate

Run the minimum flow rate necessary. Typically Deere planters require 0.5—0.7 with a maximum of 1.5 on a scale of 1—10. Most tractors this will equate to 10% or less of available flow. Additional flow will waste power and also increase stress and temperature of the GFX, along with hydraulic oil temperature.

Frame Height

GFX tools are designed to work best when the toolbar is kept within two (2) inches of the industry standard height of 20" from bottom of toolbar to the ground. This is true with all SurePoint planter attachments and implements. Typically the GFX system is used on larger planters with multiple sections and a central fill seed distribution system on the middle of the frame. On planters of this type the center of the frame almost always runs deeper than the ends of the wings. If you do not have markers on the planter, you may consider adding a weight kit to the ends of the frame to help level out the length of the toolbar, especially on narrow row spacing.

Note: Do NOT measure frame height on concrete or similar hard surfaces. Measuring the toolbar height must be done in the field.


Note: Consult your planter manual to make adjustments. It is also possible to alleviate this problem by running the row units under the center section in a higher setting than the wings so that under full weight the frame height will be more uniform.


Frame Level

Since the GFX unit is frame mounted, it is important to remember that is designed to work best when the toolbar is level. Extreme nose-up and nose-down angles of attack will lead to poor performance not only from your GFX unit, but from the entire planter.


Bleeding the Hydraulic Circuit

The SurePoint GFX system has been designed to allow the operator to bleed the hydraulic circuit by purging air out of the system from either end of the toolbar. In practice it will be virtually impossible to completely bleed the system in the shop. A certain amount of air will simply need to work itself out over time. You will be able to sufficiently bleed the system using the following procedure.

 **WARNING!**—by pressing this button, hydraulics will turn on and row cleaners will move. Make sure area is clear and safe before activating.

 **WARNING!** Before you activate your hydraulic circuit, make sure that all connections are tight

- 1) Attach one end of a 1/4" flexible hose to the bleed valve and route the hose into a bucket. Repeat for bleed valve on opposite end of the planter.
- 2) Make sure the pressure setting in the system is set to zero (0)
- 3) Open both bleed valves slightly
- 4) Navigate to the cleanout screen on your VT and activate the cleanout control.
- 5) While keeping the GFX control at zero (0), increase the tractor SCV hydraulic control to 1-2 GPM (gallons per minute), or approximately 5% flow.
- 6) Gradually increase pressure setting on the electronic control knob until a slow steady stream of fluid is flowing from the bleed adapters. At this time you will likely see spurts surging out of the bleed adapters. Continue the bleed process until you see clean fluid coming out.
- 7) Once clean hydraulic fluid flows freely from the bleed adapter, close the bleed valves and toggle OFF the cleanout button. Cycle the cleanout button a few additional times ON and OFF and then open the bleed valves again to release any additional air bubbles. After 10 gallons of fluid has been cycled, your system is considered sufficiently bled.
- 8) Ensure the cleanout function is OFF and both bleed valves are closed.

 **CAUTION!** Operating the tractor's SCV flow greater than 20 GPM will cause damage. The GFX row units have very small, single acting hydraulic cylinders. As a result, very little hydraulic flow is required for sufficient operation.

Flow Rate

Run the minimum flow rate necessary. Typically Deere planters require 0.5—0.7 with a maximum of 1.5 on a scale of 1—10. Most tractors this will equate to 10% or less of available flow. Additional flow will waste power and also increase stress and temperature of the GFX, along with hydraulic oil temperature.

Care & Maintenance

Cleaning

Under no circumstance should the Reflex modules or ECU be cleaned with a pressure washer. While the ECU is sealed, the intense pressure generated by pressure washers may penetrate the seals and cause irreversible damage.



At the end of each season the GFX row units should be cleaned to remove excess soil and debris. It is acceptable to use a pressure washer for this, however strong soaps and solvent should be avoided.



WARNING!: For best results, the planter should be connected to the tractor and GFX system set at 50% pressure. This will allow cylinder rod to be extended slightly so any dirt and debris around the cylinder rod seal can be washed out. After completion, cycle the GFX units up and down a few times and then release all hydraulic pressure to continue cleaning.

Daily Service

At the end of each day, inspect the GFX system for any loose or damaged hoses, harnesses and connections. Inspect the row cleaners and clear any debris from pivot points.

Lubrication

Trashwheel hubs are the main lubrication point on the GFX unit. Every 120 acres per row, the pipe plugs should be removed and grease zerk installed for greasing. Grease should be injected into the hub until you see clean grease exiting the seal area at the back of the hub. Wipe off any excess grease with a rag.

Annual Service

No Lubrication is required on the GFX arm and cylinder assembly. The pivot bushings on the cylinder and arm are greaseless and have never-seize applied to them during assembly to prevent corrosion. Under extreme use in conditions where very abrasive soils are present it may be advisable to unbolt the arms, clean and re-apply never-seize annually.



WARNING!: Always store the disconnected GFX unit with pressure removed from the circuit. Please refer to your tractor manual on the best way to do this. Failure to release stored hydraulic pressure could result in injury or death.

Harness Schematics

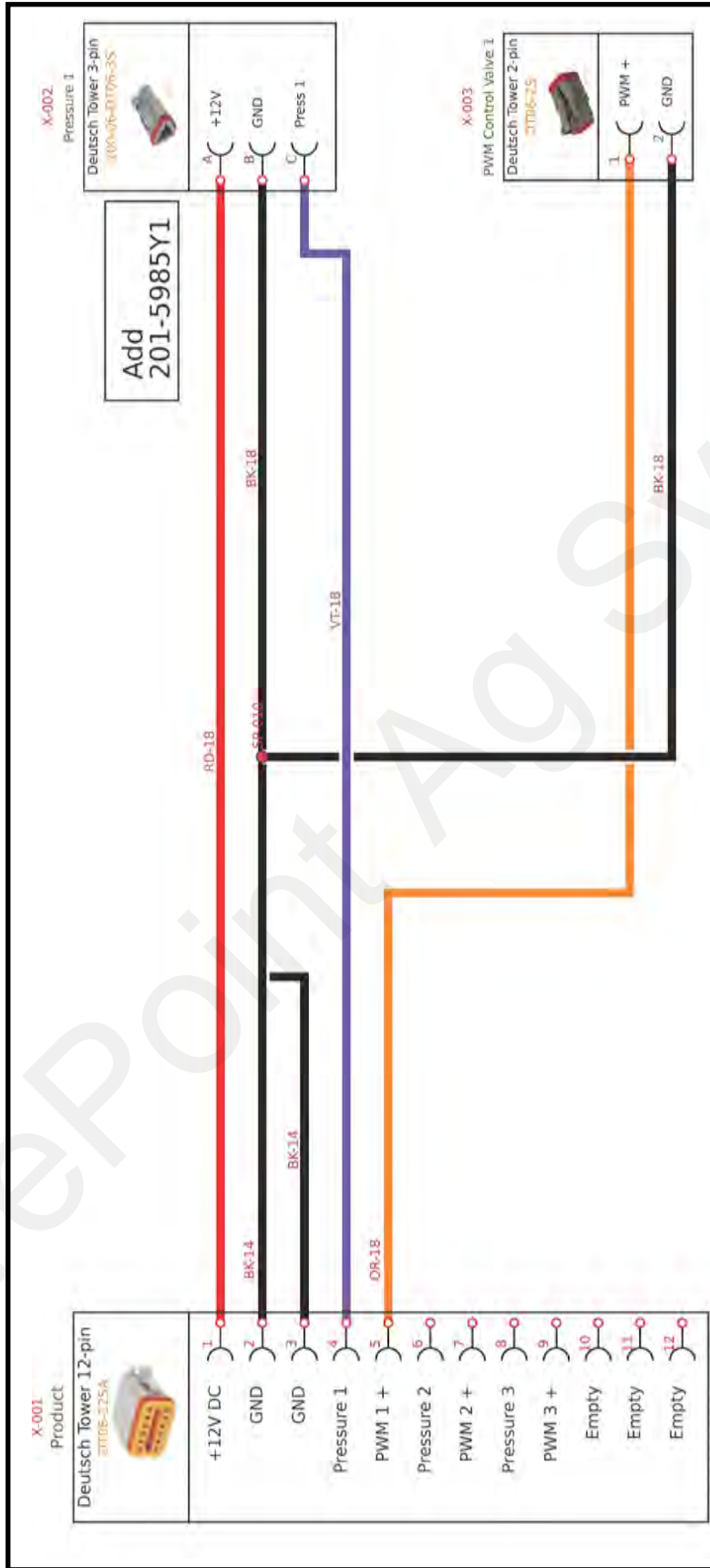


Figure 7.01: 207-12-5973Y1 GFX Row Cleaner Single Section Final Harness.

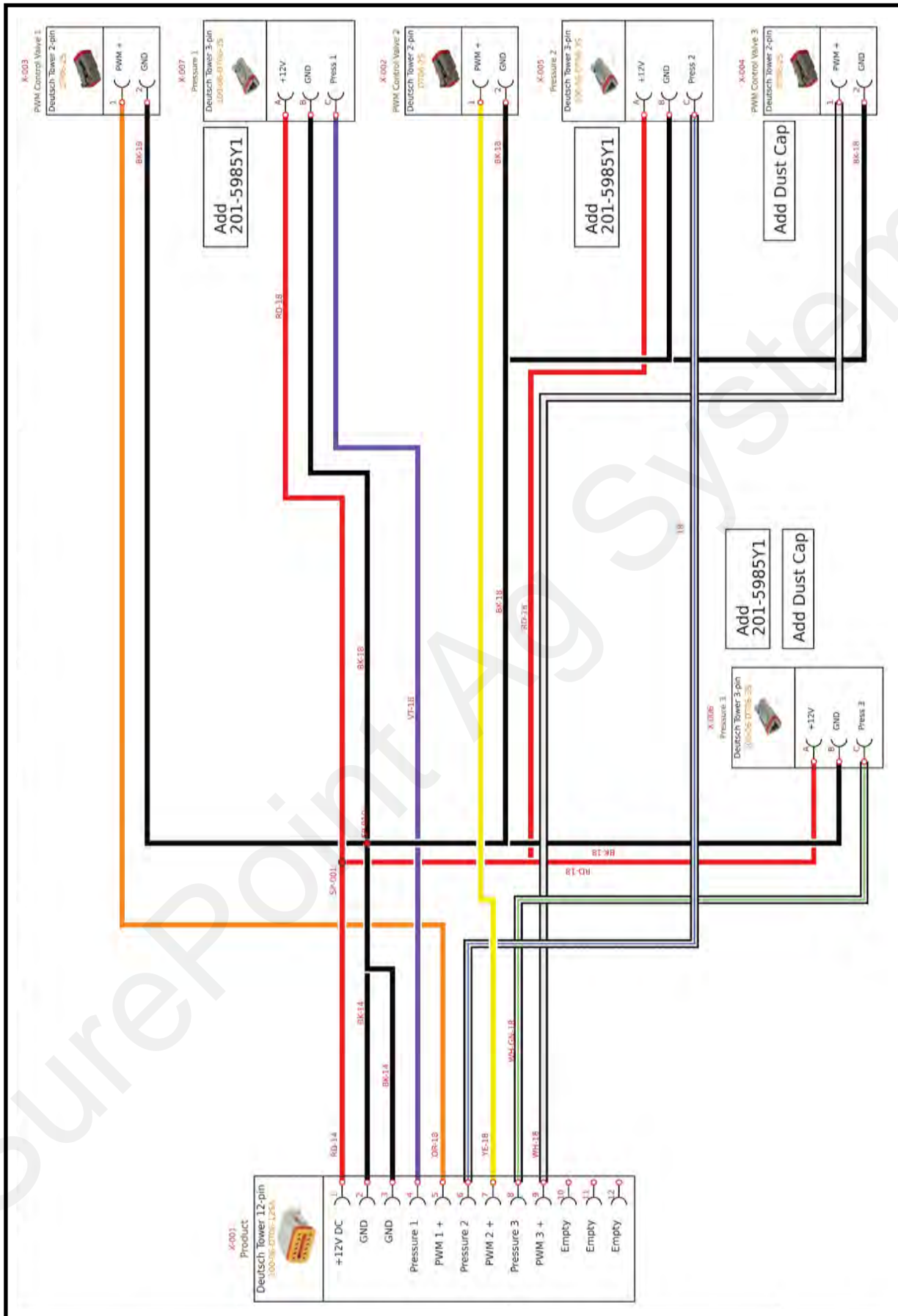


Figure 7.02: 207-12-5919Y1 GFX Row Cleaner 3 Section Final Harness.

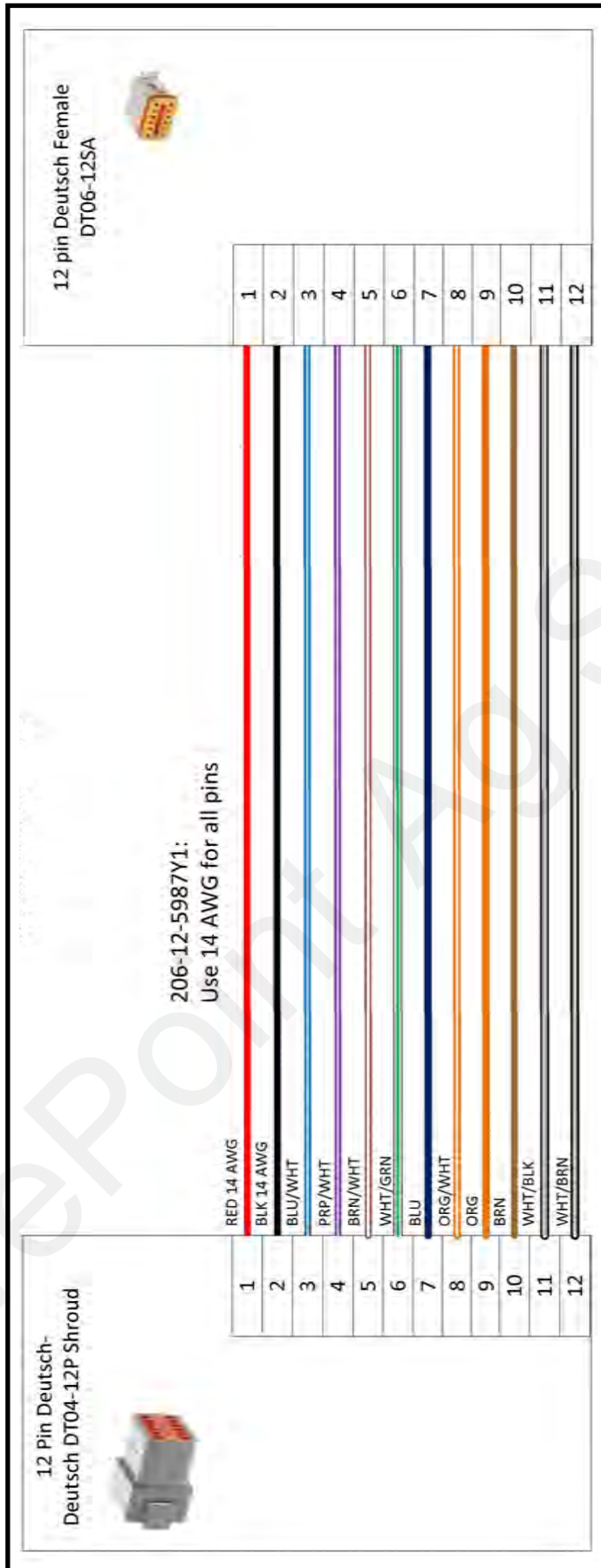


Figure 7.03: 206-12-3434Y1 through 3439Y1, and 5987Y1. 12 Pin Deutsch Extension Harness

- 206-12-3434Y1 5'
- 206-12-3435Y1 10'
- 206-12-3436Y1 20'
- 206-12-3437Y1 30'
- 206-12-3438Y1 40'
- 206-12-3439Y1 50'
- 206-12-5987Y1 60'

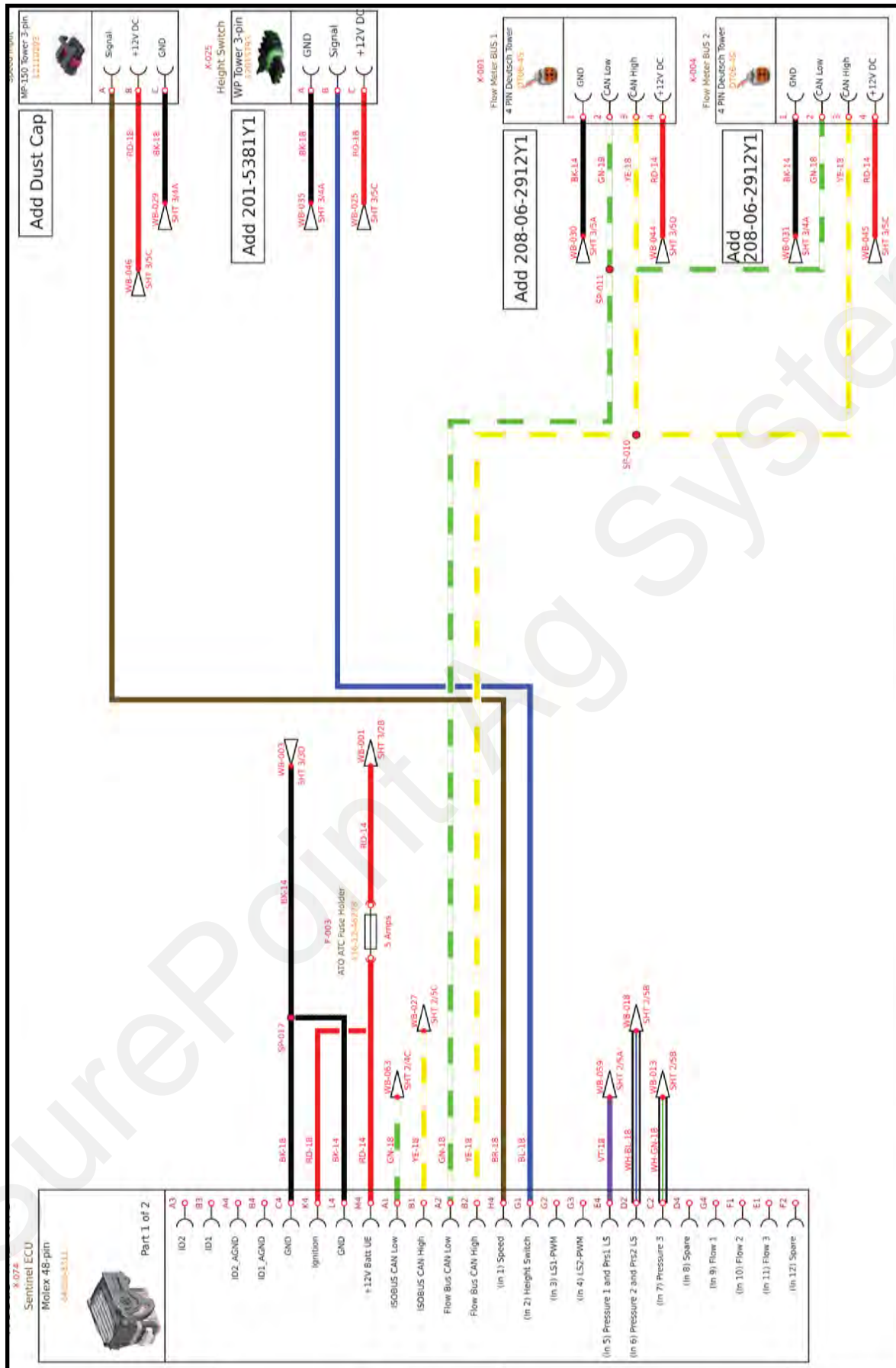


Figure 7.04: 208-12-5765Y2 GFX Row Cleaner Control Harness, pg 1.



Figure 7.05: 208-12-5765Y2 GFX Row Cleaner Control Harness, pg 2.

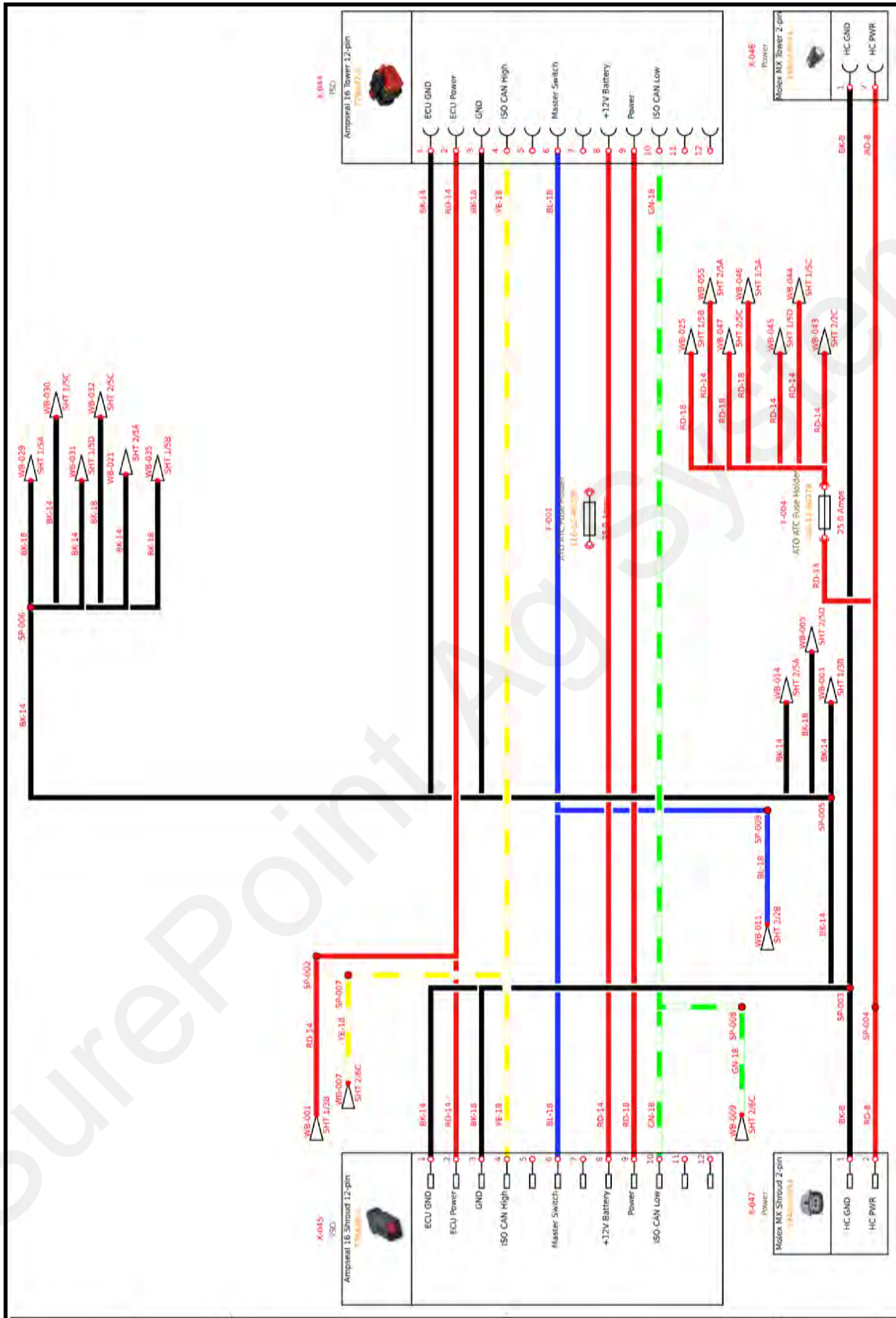


Figure 7.06: 208-12-5765Y2 GFX Row Cleaner Control Harness, pg 3.

GFX Universal Mount Kits

Universal Mounting Kits

The SurePoint GFX has several mounting kits available. See the following pages for some of those options. Please contact your dealer if a kit is not listed for your planter, or if questions arise about kits not shown.



Figure 7.07: 561-03-100100, Universal Narrow shown

Universal GFX Mount Bracket Kits	
SurePoint Kit P/N	Description
561-03-100100	Universal Narrow
561-03-100200	Universal Wide
561-03-100300	With Conceal
561-03-100400	DB Int Pro Shift
561-03-100500	DB Electric Drive
561-03-100550	DB Electric Drive Narrow
561-03-100600	PP Setback
561-03-100700	AGCO 6000/8000/9000
561-03-100800	Kinze 3000
561-03-100850	Kinze 4900
561-03-100900	Case 1200
561-03-100950	Case 2150
561-03-100990	Horsch

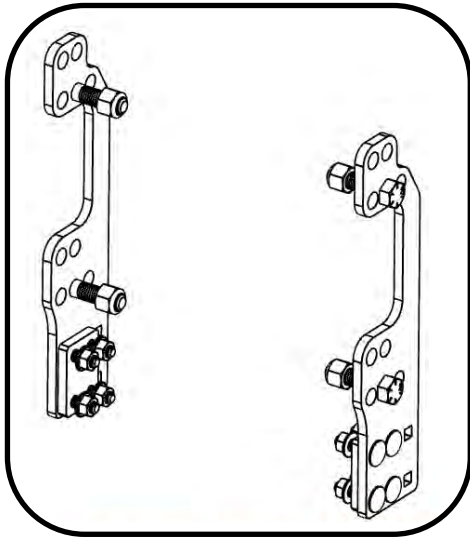


Figure 7.08: 561-03-100200

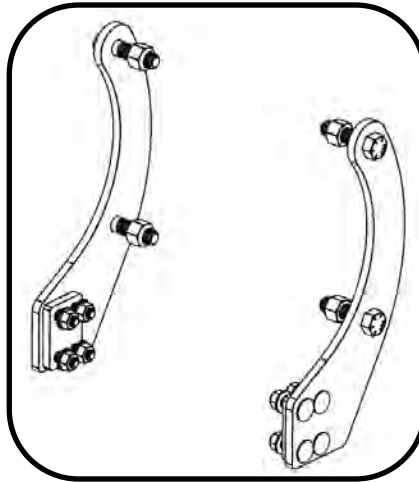


Figure 7.09: 561-03-100300

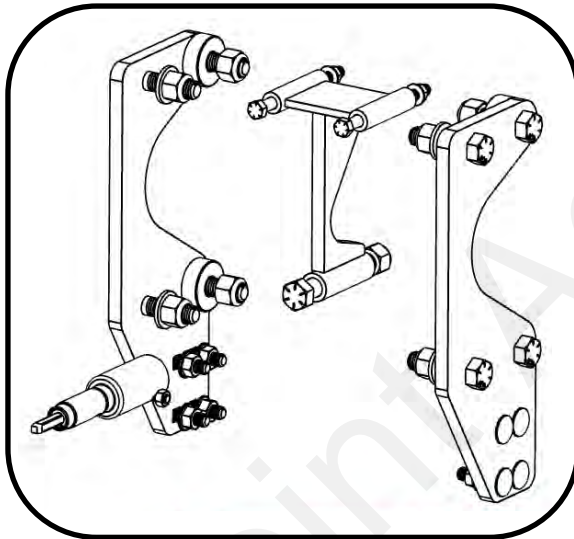


Figure 7.10: 561-03-100400

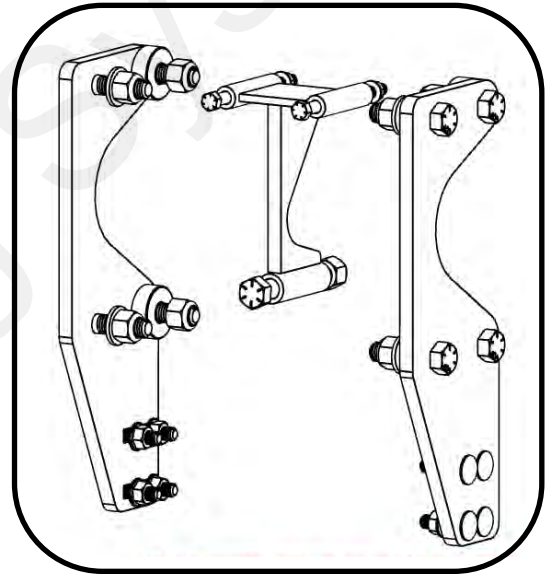


Figure 7.11: 561-03-100600

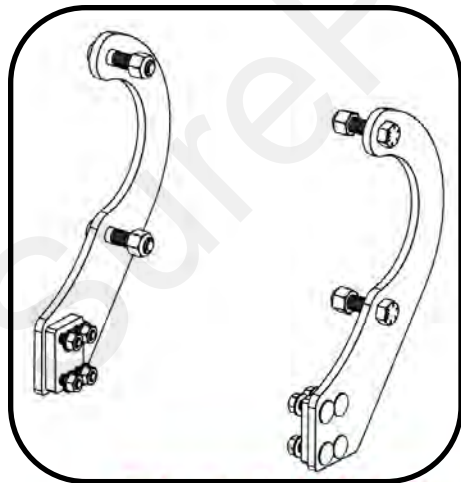


Figure 7.12: 561-03-100700

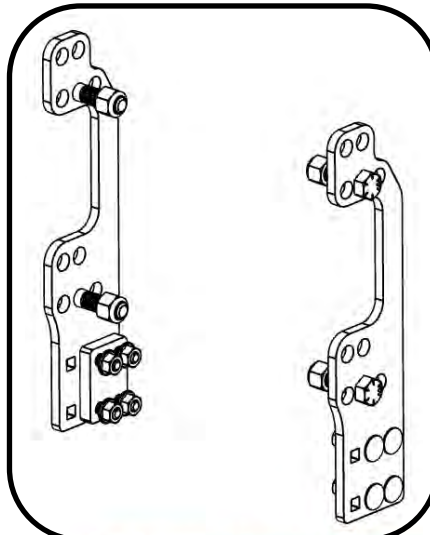


Figure 7.13: 561-03-100800

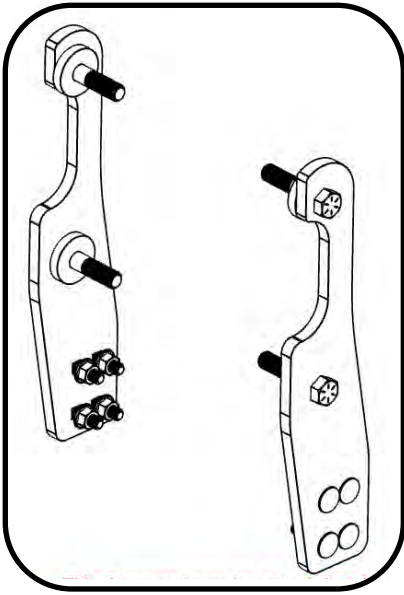


Figure 7.14: 561-03-100850

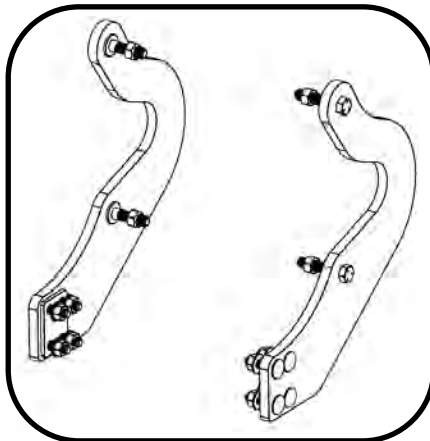


Figure 7.15: 561-03-100900

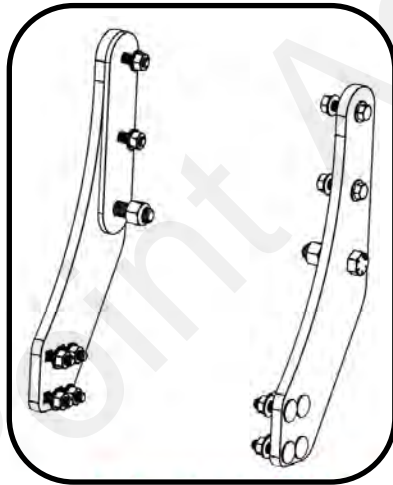


Figure 7.16: 561-03-100950

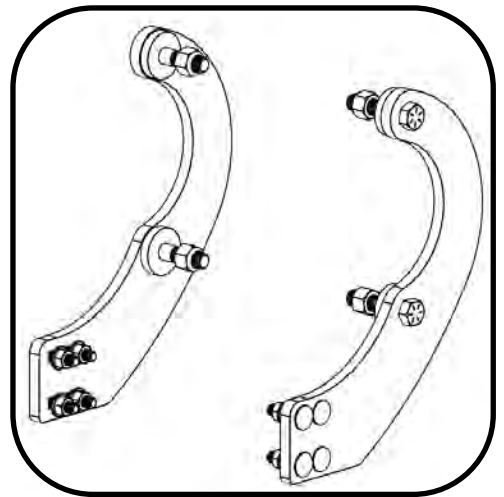


Figure 7.17: 561-03-100990

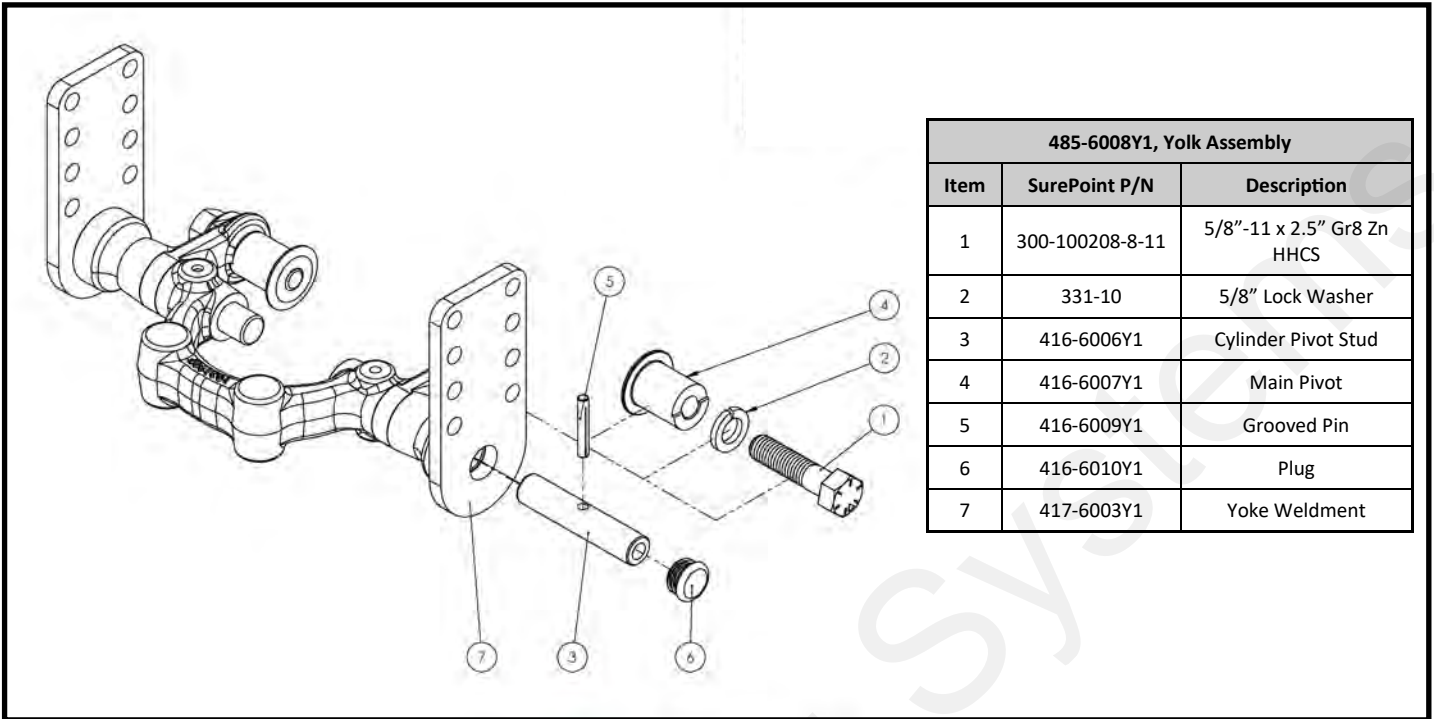


Figure 7.18: 485-6008Y1, Yolk Assembly

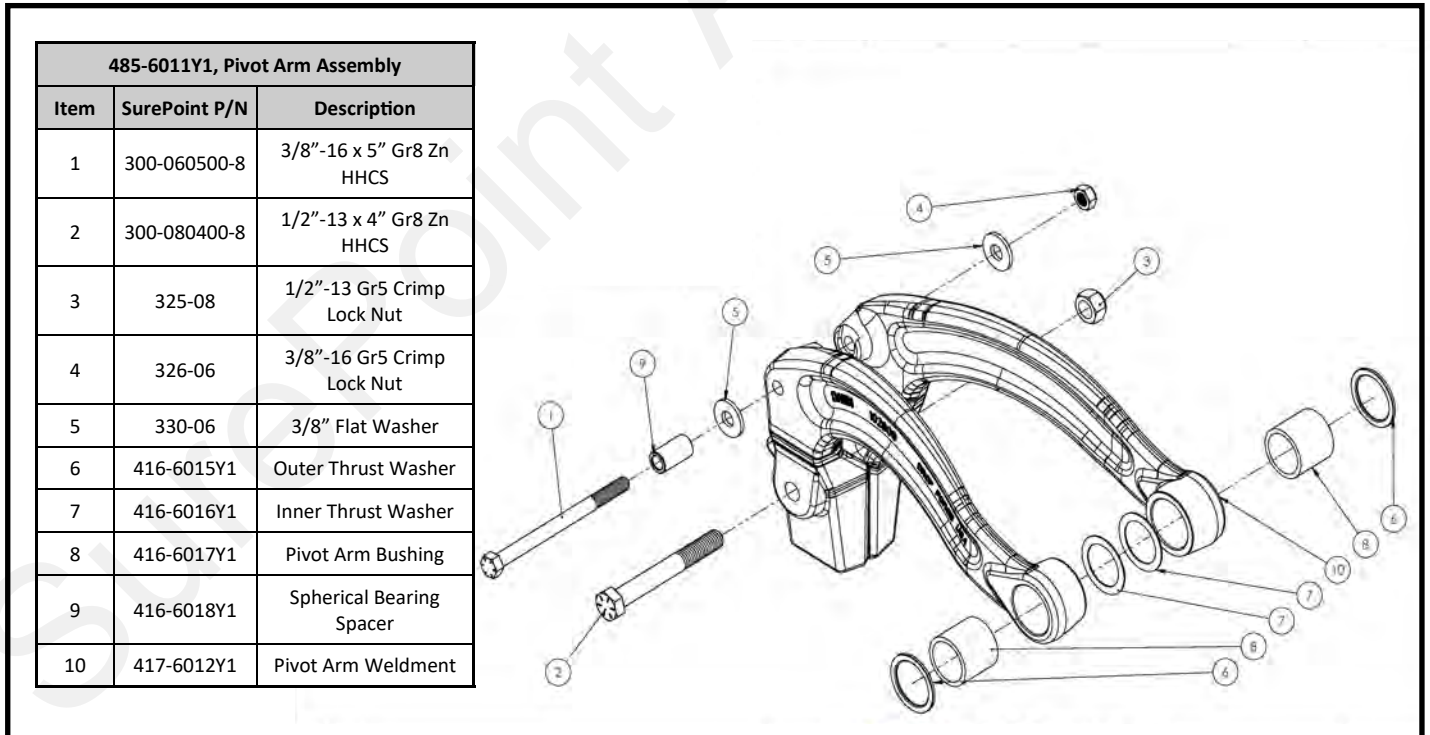
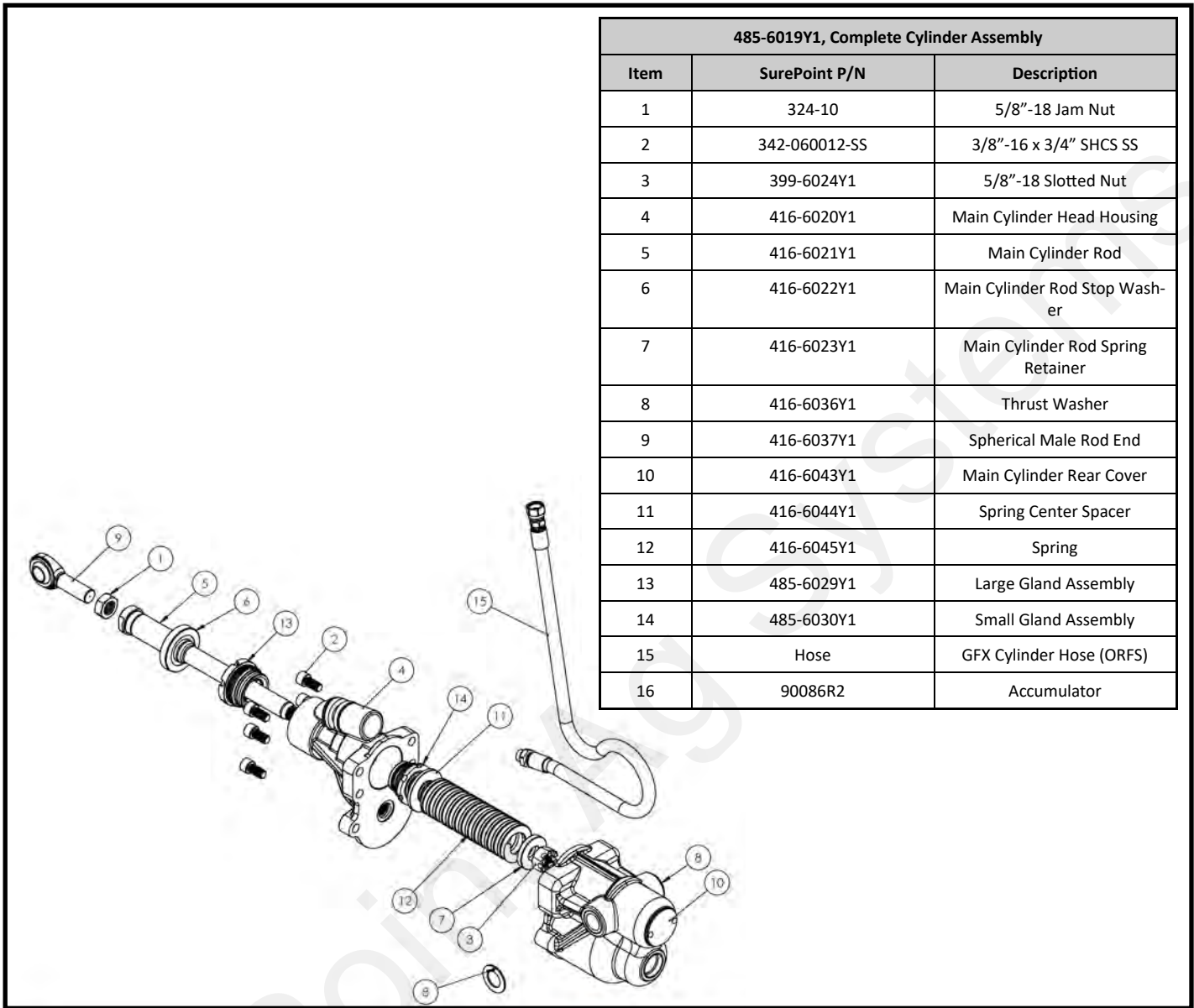


Figure 7.19: 485-6011Y1, Pivot Arm Assembly



485-6019Y1, Complete Cylinder Assembly		
Item	SurePoint P/N	Description
1	324-10	5/8"-18 Jam Nut
2	342-060012-SS	3/8"-16 x 3/4" SHCS SS
3	399-6024Y1	5/8"-18 Slotted Nut
4	416-6020Y1	Main Cylinder Head Housing
5	416-6021Y1	Main Cylinder Rod
6	416-6022Y1	Main Cylinder Rod Stop Washer
7	416-6023Y1	Main Cylinder Rod Spring Retainer
8	416-6036Y1	Thrust Washer
9	416-6037Y1	Spherical Male Rod End
10	416-6043Y1	Main Cylinder Rear Cover
11	416-6044Y1	Spring Center Spacer
12	416-6045Y1	Spring
13	485-6029Y1	Large Gland Assembly
14	485-6030Y1	Small Gland Assembly
15	Hose	GFX Cylinder Hose (ORFS)
16	90086R2	Accumulator

Figure 7.20: 485-6019Y1, Complete Cylinder Assembly

M—Series Hub Assembly		
Item	SurePoint P/N	Description
1	9101	5/8"-11 x 1.5" Gr8 HHCS
2	9032	5/8" Flat Washer
3	100066R01	Threaded Drive Shaft
4	300-080208-5	1/2"-13 x 2.5" Gr5 Zn HHCS
5	416-6098Y1	Triple Lip Seal, Ø 1.5"
6	416-6095Y1	Phenolic Seal Ring
7	416-6097Y1	Tapered Cone Bearing, Ø 1" ID
8	416-6092Y1	Wheel Hub Press Assembly
9	416-6102Y1	3/4" Tongue Washer
10	354-0532100	Cotter Pin, 5/32 x 1"
11	300-060500-8	3/4"-13 Castellated Nut
12	9662R01	O-ring
13	416-6103Y1	Supercap w/ Protector
14	323-08	1/2"-13 Flange Nut
15	9785	Pipe Plug
16	363-020	Grease Zerk

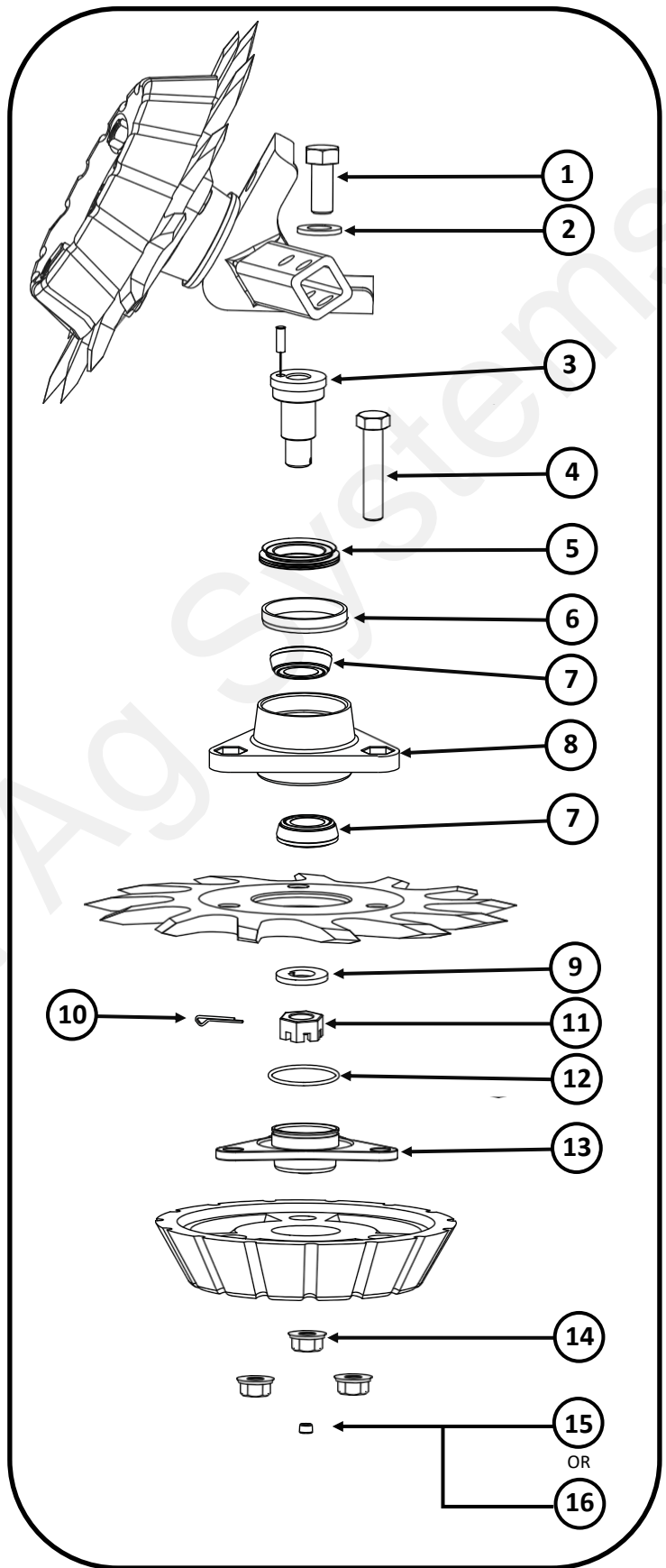


Figure 7.21

Yetter Hub Assembly		
Item	SurePoint P/N	Description
1	416-6062Y1	TILLXTREME Bearing Assembly
2	307-050012	5/16" x 0.75" Flange Bolt

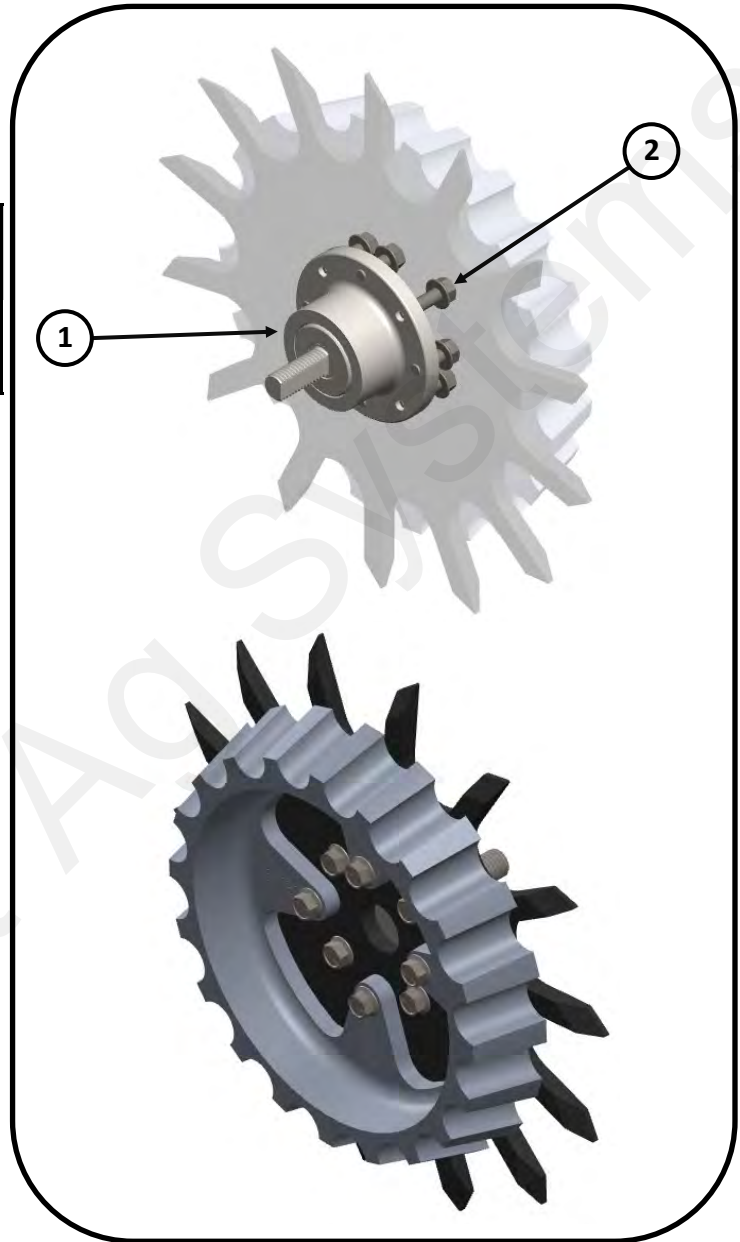


Figure 7.22

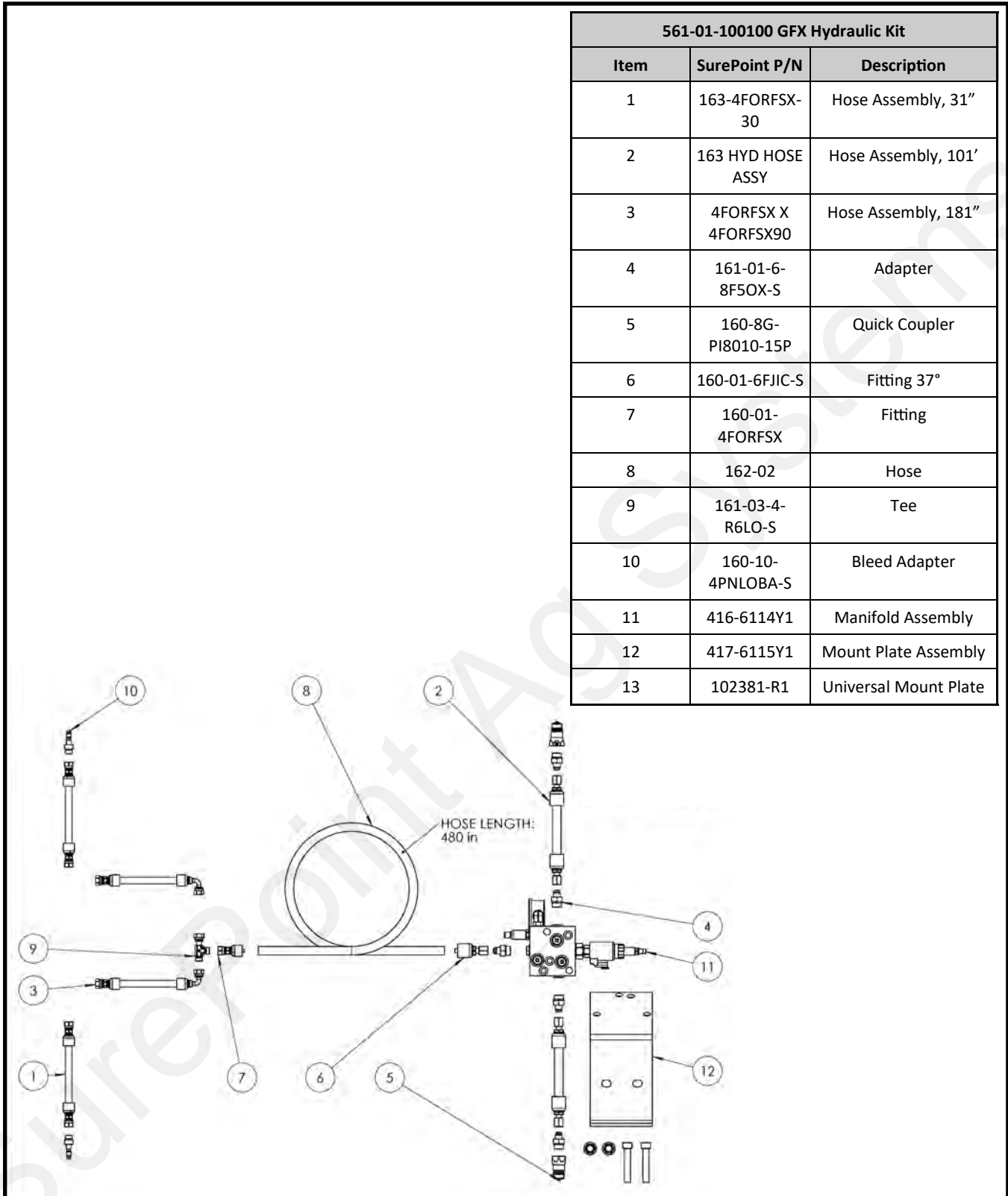


Figure 7.23

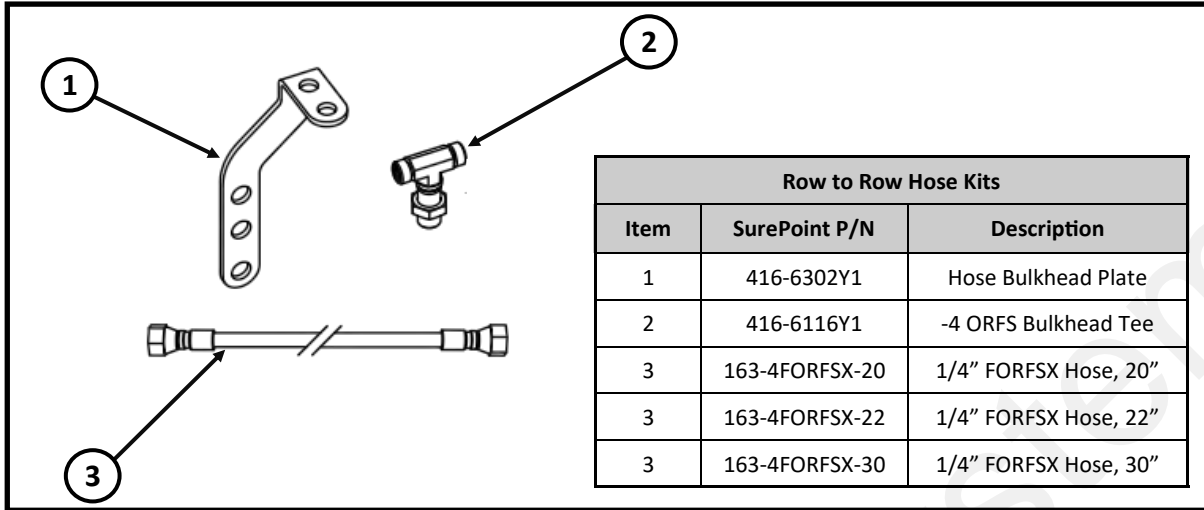


Figure 7.24

SurePoint Ag Systems

This page left intentionally blank.



SurePoint
Ag Systems

SurePoint Ag Systems

9904 Hwy 25

Atwood, KS 67730

www.SurePointag.com