

FALCON SF700 STRIP FRESHENER OPERATOR MANUAL

M0333-01

7/26

This manual is applicable to: Falcon SF700 Strip Freshener

Record the model number and serial number of your planter along with date purchased:

Model Number _____ SF700 _____

Serial Number _____

Date Purchased _____

SERIAL NUMBER

The serial number plate is located on the tillage system as shown below. The serial number provides important information about your strip freshener and is needed to obtain correct replacement parts. Always provide model number and serial number to your Kinze Dealer when ordering parts or when contacting Kinze Manufacturing, Inc.



Serial Number Plate Location

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TO THE DEALER

Predelivery service includes assembly, lubrication, adjustment and test. This service helps ensure implement is delivered to retail customer/end user ready for field use.

PREDELIVERY CHECKLIST

Use the following checklist after implement is completely assembled. Check off each item as it is found satisfactory or after proper adjustment is made.

- ☐ Row units properly spaced and optional attachments correctly assembled.
- ☐ All grease fittings in place and lubricated.
- ☐ All working parts move freely, bolts are tight, and cotter pins are spread.
- ☐ Check for oil leaks and proper hydraulic operation.
- ☐ Hydraulic hoses correctly routed to prevent damage.
- ☐ Inflate tires to specified air pressure and torque wheel lug bolts and lug nuts as specified in the Operator Manual.
- ☐ All safety decals correctly located and legible. Replace if damaged.
- ☐ All reflective decals and SMV sign correctly located and visible when the planter is in transport position.
- ☐ Safety/warning lights correctly installed and working properly.
- ☐ Paint all parts scratched during shipment or assembly.
- ☐ All safety lockup devices on the planter and correctly located.
- ☐ Auxiliary safety chain properly installed and hardware torqued to specification.

Implement has been thoroughly checked and to the best of my knowledge is ready for delivery to the customer.

(Signature of Set-Up Person/Dealer Name/Date)

OWNER REGISTER

Name _____ Delivery Date _____
Street Address _____ Model No. SF700 Serial No. _____
City, State/Province _____ Dealer Name _____
ZIP/Postal Code _____ Dealer No. _____

DELIVERY CHECKLIST

Use the following checklist at time implement is delivered as a reminder of very important information which should be conveyed to retail customer/end user. Check off each item as it is fully explained.

- ☐ Life expectancy of this or any other machine is dependent on regular lubrication as directed in the Operator Manual.
- ☐ All applicable safety precautions.
- ☐ Along with retail customer/end user, check reflective decals and SMV sign are clearly visible with planter in transport position and attached to tractor. Check safety/warning lights are in working condition. Tell retail customer/end user to check federal, state/provincial, and local regulations before towing or transporting on a road or highway.
- ☐ Give Operator Manual, Parts Manual, and all Instruction Sheets to retail customer/end user and explain all operating adjustments.
- ☐ Read warranty to retail customer/end user.
- ☐ Complete Warranty and Delivery Report form.

To the best of my knowledge this machine has been delivered ready for field use and customer has been fully informed as to proper care and operation.

(Signature of Delivery Person/Dealer Name/Date)

AFTER DELIVERY CHECKLIST

The following is a list of items we suggest to check during the first season of use of the equipment.

- ☐ Check implement performance with retail customer/end user.
- ☐ Review importance of proper maintenance and adherence to all safety precautions with retail customer/end user.
- ☐ Check for parts that may need to be adjusted or replaced.
- ☐ Check all safety decals, reflective decals, and SMV sign are correctly located as shown in the Parts Manual and that decals are legible. Replace if damaged or missing.
- ☐ Check safety/warning lights are working properly.

(Signature of Follow-Up Person/Dealer Name/Date)

**All registrations must be submitted online at “business.kinze.com” within 5 business days of delivery.
Retain a copy of this form for auditing purposes.**

Tear Along Perforation

KINZE

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Kinze Manufacturing, Inc. thanks you for your patronage. We appreciate your confidence in Kinze farm machinery. Your Falcon SF700 Strip Freshener has been carefully designed to provide dependable operation in return for your investment.

This manual has been prepared to aid you in the operation and maintenance of the tillage system. It should be considered a permanent part of the machine and remain with the machine when you sell it.

It is the responsibility of the user to read and understand the Operator Manual in regards to safety, operation, lubrication and maintenance before operation of this equipment. It is the user's responsibility to inspect and service the machine routinely as directed in the Operator Manual. We have attempted to cover all areas of safety, operation, lubrication and maintenance; however, there may be times when special care must be taken to fit your conditions.

Throughout this manual the symbol  and the words **DANGER**, **WARNING**, and **CAUTION** are used to call attention to safety information that if not followed, will or could result in death or injury. **NOTICE** and **NOTE** are used to call your attention to important information. The definition of each of these terms follows:

 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	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	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	Used to address safety practices not related to personal injury.

NOTE: Special point of information or machine adjustment instructions.

**WARNING**

Improperly operating or working on this equipment could result in death or serious injury. Read and follow all instructions in Operator's Manual before operating or working on this equipment.

**WARNING**

Some photos in this manual may show safety covers, shields, or lockup devices removed for visual clarity. **NEVER OPERATE OR WORK ON** machine without all safety covers, shields, and lockup device in place as required.

NOTE: Some photos in this manual may have been taken of prototype machines. Production machines may vary in appearance.

NOTE: Some photos and illustrations in this manual show optional attachments installed. Contact your Kinze Dealer for purchase of optional attachments.

WARRANTY

The Kinze Limited Warranty for your new machine is stated on the retail purchaser's copy of the Warranty And Delivery Receipt form. Additional copies of the Limited Warranty can be obtained through your Kinze Dealer.

Warranty, within the warranty period, is provided as part of Kinze's support program for registered Kinze products which have been operated and maintained as described in this manual. Evidence of equipment abuse or modification beyond original factory specifications will void the warranty. Normal maintenance, service and repair is not covered by Kinze warranty.

To register your Kinze product for warranty, a Warranty And Delivery Receipt form must be completed by the Kinze Dealer and signed by the retail purchaser, with copies to the Dealer, and to the retail purchaser. Registration must be completed and submitted to Kinze Manufacturing, Inc. within 5 business days of delivery of the Kinze product to the retail purchaser. Kinze Manufacturing, Inc. reserves the right to refuse warranty on serial numbered products which have not been properly registered.

If service or replacement of failed parts which are covered by the Limited Warranty are required, it is the user's responsibility to deliver the machine along with the retail purchaser's copy of the Warranty And Delivery Receipt to the Kinze Dealer for service. Kinze warranty does not include cost of travel time, mileage or hauling. Any prior arrangement made between the Dealer and the retail purchaser in which the Dealer agrees to absorb all or part of this expense should be considered a courtesy to the retail purchaser.

Kinze warranty does not include cost of travel time, mileage, hauling, or labor.

GENERAL INFORMATION

The Falcon SF700 is available with liquid fertilizer tanks and various other options. Contact your Kinze Dealer for additional details.



Falcon SF700 Strip Freshener with Liquid Fertilizer Tanks

Information used in these instructions was current at time of printing. However, due to Kinze's ongoing product improvement, production changes may cause your machine to appear slightly different in detail. Kinze Manufacturing, Inc. reserves the right to change specifications or design without notice and without incurring obligation to install the same on machines previously manufactured. To obtain the most recent version of your publication, please contact your Kinze dealer.

Right hand (R.H.) and left hand (L.H.), as used throughout this manual, are determined by facing direction machine travels in use unless otherwise stated.

NOTE: Metric unit values in parentheses are approximate values and are to be used for reference only.

TOOLS REQUIRED

Hardware Size / Tool Required			
$\frac{1}{4}" = \frac{7}{16}"$	$\frac{7}{16}" = \frac{5}{8}"$ (nut for $\frac{7}{16}"$ hardware uses $\frac{11}{16}"$ tool)	$\frac{3}{4}" = 1\frac{1}{8}"$	$1\frac{1}{4}" = 1\frac{7}{8}"$
$\frac{5}{16}" = \frac{1}{2}"$	$\frac{1}{2}" = \frac{3}{4}"$	$\frac{7}{8}" = 1\frac{5}{16}"$	$1\frac{1}{2}" = 2\frac{1}{4}"$
$\frac{3}{8}" = \frac{9}{16}"$	$\frac{5}{8}" = 1\frac{5}{16}"$	$1" = 1\frac{1}{2}"$	

Model Dimension and Weights

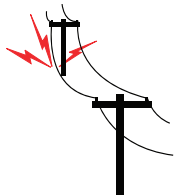
Specification	36R 22"	36R 20"	24R 30"	24R 22"	24R 20"	16R 30"
Length						
Field Position	31' 8"	29' 8"	29' 8"	25' 8"	24' 8"	24' 8"
Transport Position	46' 1"	43' 1"	43' 1"	36' 2"	34' 2"	34' 2"
Width						
Field Position - No Markers	66' 8"	60' 8"	60' 8"	44' 8"	40' 8"	40' 8"
Transport Position	17' 0"	17' 0"	16' 4"	17' 0"	17' 0"	16' 4"
Height						
Field Position	11' 2"	11' 2"	11' 2"	11' 2"	11' 2"	11' 2"
Transport Position	9' 10"	9' 10"	9' 10"	9' 10"	9' 10"	9' 10"
Weight (Empty)						
Base Machine - Empty	N/A	N/A	N/A	N/A	N/A	N/A
Base Machine - W/Fertilizer	N/A	N/A	N/A	N/A	N/A	N/A
Hitch Weight - Transport	N/A	N/A	N/A	N/A	N/A	N/A
Hitch Weight - Field	N/A	N/A	N/A	N/A	N/A	N/A

Tractor Hydraulic Requirements @ 2350 PSI

	GPM	SCV	Description
Weight Distribution / Hydraulic Air Compressor	32	3	- Planter Lift (Red Labels) - Fold (Blue Labels) - Wing Down Force/Air Compressor (Black Labels)
NOTES: → All SCVs should be set to max flow at all times. → Case drain is needed for air compressor circuit. → Consult your tractor manufacturer to ensure proper connection, hydraulic flow, pressure and heat dissipation.			

1. Read and understand instructions provided in this manual and warning labels. Review these instructions frequently!
 2. This machine is designed and built with your safety in mind. Do not make any alterations or changes to this machine. Any alteration to design or construction may create safety hazards.
 3. A large portion of farm accidents happen from fatigue or carelessness. Safe and careful operation of tractor and tillage system will help prevent accidents.
 4. Never allow tillage system to be operated by anyone unfamiliar with operation of all functions of the unit. Operators must read and thoroughly understand all instructions given in this manual before operating or working on equipment.
 5. Be aware of bystanders, particularly children! Always look around to make sure it is safe to start tow vehicle engine or move tillage system. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
 6. Make sure tillage system weight does not exceed towing capacity of tractor, or bridge and road limits. This is critical to maintain safe control and prevent death or injury, or property and equipment damage.
 7. Never ride or allow others to ride on tillage system.
 8. Store tillage system in an area away from human activity. DO NOT permit children to play on or around the stored unit.
 9. Keep hands, feet, and clothing away from moving parts. Do not wear loose-fitting clothing which may catch in moving parts.
 10. Always wear protective clothing, shoes, gloves, hearing, and eye protection applicable for the situation.
 11. Do not allow anyone to stand between tongue or hitch and towing vehicle when backing up to tillage system.
 13. Prevent electrocution, other injuries, or property and equipment damage. Watch for obstructions such as wires, tree limbs, etc. when operating machine. Be aware of clearances during turns and when folding/unfolding tillage system.
 14. Reinstall all guards removed for maintenance activities. Never leave guards off during operation.
 15. Use of aftermarket hydraulic, electric, or PTO drives may create serious safety hazards to you and people nearby. If you install such drives, follow all appropriate safety standards and practices to protect you and others near this tillage implement from injury.
 16. Follow all federal, state/provincial, and local regulations when towing farm equipment on a public highway. Use safety chain (not an elastic or nylon/plastic tow strap) to retain connection between towing and towed machines in the event of primary attaching system separation.
 17. Make sure all safety/warning lights, SMV sign, and reflective decals are in place and working properly before transporting the machine on public roads.
 18. Limit towing speed to 20 km/h. Tow only with a farm tractor equipped with a minimum of a Cat 4 hitch. Allow for unit length when making turns.
 19. Reduce speed prior to turns to avoid the risk of overturning. Always drive at a safe speed relative to local conditions and ensure your speed is slow enough for a safe emergency stop.
 20. Chemical application is often an integral part of crop establishment. Follow label instructions for proper chemical mixing, handling and container disposal methods.
 21. Be familiar with safety procedures for immediate first aid should you accidentally contact chemical substances.
 22. Use the proper protective clothing and safety equipment when handling chemicals.
 23. Chemicals are supplied with Material Safety Data Sheets (MSDS) that provide full information about the chemical, its effects on exposure, and first aid needs in the event of an emergency. Keep your MSDS file up-to-date and available for first responders in case of emergency.
 24. When servicing ground engaging components such as opening disks and firming points, use special care to avoid points and edges worn sharp during use.
 25. Use professional help if you are unfamiliar with working on hydraulic systems. Pressurized hydraulic fluid can penetrate body tissue and result in death, serious infection, or other injuries.
 26. Disposing of waste improperly can threaten the environment. To dispose of your equipment properly contact your local environmental or recycling center.
- Never pour waste onto the ground, down a drain, or into any water source.
- When disposing of waste such as oil, use leakproof containers. Be sure to use containers that do not resemble food or beverage which may mislead someone into consuming them. Dispose of oil per your local, regional requirements.
- When disposing of any fertilizer chemicals used, contact the supplier of the chemicals.
- Falcon SF700 strip freshener consists of 85% recyclable metals, 10% recyclable plastic and rubber, and 5% waste.

Following are some common hazard warnings associated with this equipment. Pay close attention to all safety, operating, and maintenance information in this manual and decals applied to your equipment.



Contacting or coming close to power lines or other high energy sources will cause death or serious injury.

Keep away from power lines or high energy sources at all times.



Improperly operating or working on this equipment could result in death or serious injury. Read and follow all instructions in Operator Manual before operating or working on this equipment.



Falling equipment can cause death or serious injury. Install all lockup devices or lower tillage system to ground before working on equipment.



Explosive separation of rim and tire parts can cause death or serious injury. Overinflation, rim and tire servicing, improper use of rims and tires, or worn or improperly maintained tires could result in a tire explosion.

SAFETY SIGNS AND DECALS



All safety/warning lights, reflective decals, and SMV sign must be in place and visible before transporting machine on public roads or death, serious injury, and damage to property and equipment may result. Check federal, state/provincial, and local regulations before transporting equipment on public roads.

Safety signs and decals are placed on the machine to warn of hazards and provide important operating and maintenance instructions. Information on these signs are for your personal safety and the safety of those around you. FOLLOW ALL SAFETY INSTRUCTIONS!

- **Keep signs clean so they can be easily seen. Wash with soap and water or cleaning solution as required.**
- **Replace safety signs if damaged, painted over, or missing.**
- **Check reflective decals and SMV sign periodically. Replace if they show any loss of reflective properties.**
- **When replacing decals, clean machine surface thoroughly with soap and water or cleaning solution to remove all dirt and grease.**

NOTE: Safety sign and decal locations are shown in the Parts Manual for this machine.

NOTE: Style and locations of SMV sign, reflective decals, and safety/warning lights conform to ANSI/ASABE S279.14 JUL 2008 and ANSI/ASABE S276.6 JAN 2005.

TRANSPORT AXLE CYLINDER SAFETY LOCKUP

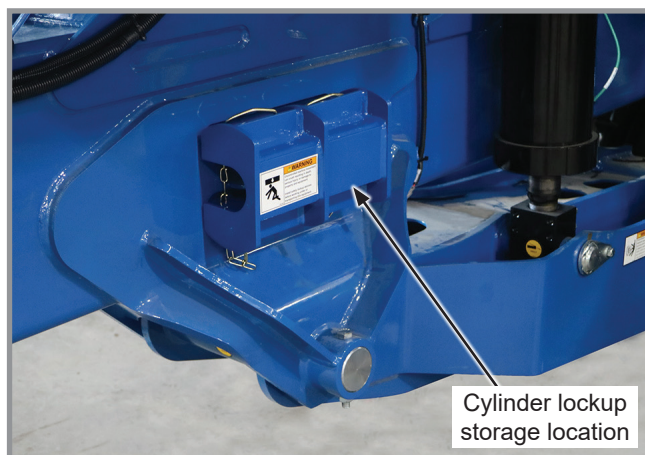


WARNING

Transport axle can lower from transport position without the use of any controller, causing death, serious injury, or damage to property and equipment. Do not operate any hydraulic function while transporting the tillage system. Make sure all transport safety lockups are installed on the four transport cylinders and all SCV controls are in their neutral state before transporting, storing and working on the implement.



Transport axle cylinder lockup installed



Cylinder lockup storage location

Transport axle cylinder lockups are required on both transport cylinders on tillage system when working on, storing, or transporting implement.

Fully extend cylinder to raised position. Install transport axle cylinder lockups. Insert wire lock pin through holes on cylinder lockup and secure.

Store transport axle cylinder lockups in cylinder lockup storage location before operating implement.

 WARNING

Tanks must be empty when transporting to avoid death, serious injury, or damage to property or equipment. Do not pull tillage implement in transport configuration with fertilizer in tanks.

 WARNING

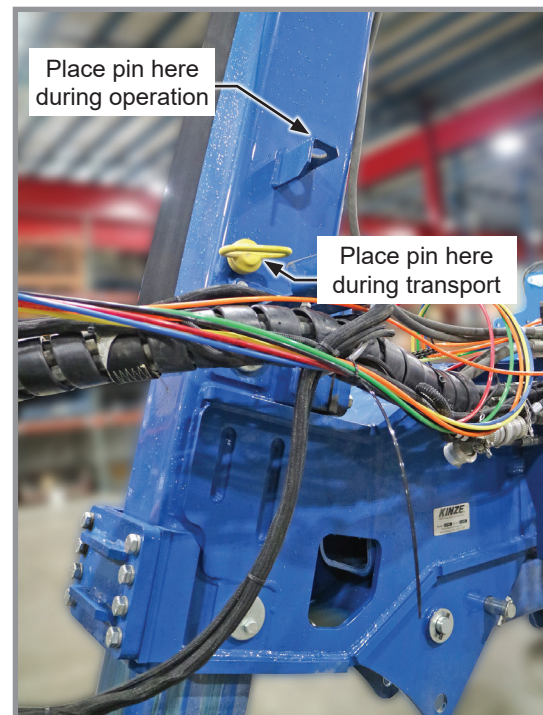
Tillage system hitch may raise uncontrollably during folding/unfolding and can cause death, serious injury, or damage property and equipment. DO NOT fold or unfold implement without implement attached to a tractor. DO NOT unhitch implement from tractor unless fully folded for transport or fully unfolded with row units lowered to ground.

 WARNING

Uncontrolled movement of equipment can cause loss of control and could result in death, serious injury, or damage to property and equipment. Install all safety pins before transporting equipment.

DRAWBAR HITCH LOCKUP

Place the drawbar hitch lockup pin in the hole on hitch when machine is in operation. Place pin in storage location while in operation.



WING LATCH LOCKUP**Hitch Release from Wing Latch**



Improperly operating or working on this equipment could result in death or serious injury. Read and follow all instructions in Operator Manual before operating or working on this equipment.

INITIAL TILLAGE SYSTEM PREPARATION

Following information is general in nature to aid in preparation of tractor and tillage system for use, and to provide general operating procedures. Operator experience, familiarity with the machine, and the following information should combine for efficient tillage operation and good working habits.

 WARNING


Explosive separation of rim and tire parts can cause death or serious injury. Overinflation, rim and tire servicing, improper use of rims and tires, or worn or improperly maintained tires could result in a tire explosion.

 WARNING

Wheel separation can cause loss of control resulting in death, serious injury, or damage to property and equipment. Check lug nuts on transport wheels are tight before operating tillage system for first time and periodically after.



Tire Locations (L.H. shown)

- Torque transport wheel $\frac{3}{4}$ "- 16 lug nuts to:
 - 24 Row 30" / 36 Row 20" / 36 Row 22" 315 ft-lb (427 N-m)
 - 24 Row 20" / 24 Row 22" / 16 Row 30" 450 ft-lb (610 N-m)
- Torque wing wheel $\frac{5}{8}$ "-18 lug nuts to 200 ft-lb (271 N-m).
- Inflate tires to the following specifications:

	36 Row 22" 36 Row 20" 24 Row 30"	24 Row 20" 24 Row 22" 16 Row 30"
Transport Tire Size (4)	445/50R 22.5	440/55R18
Transport Tire Pressure	81 PSI	73 PSI
Wing (Field) Tire Size	380/55R 16.5 (4)	380/55R 16.5 (2)
Wing (Field) Tire Pressure	65 PSI	65 PSI

- Lubricate tillage system per lubrication information in this manual.

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TRACTOR REQUIREMENTS



Loss of control of equipment during transport can result in death, serious injury, or damage to property and equipment. Tractor gross weight must be greater than implement gross weight with attachments and options.

NOTICE

Connect hydraulic motor case drain to a case drain return line with zero PSI on tractor. Failure to connect to a return with zero PSI will cause hydraulic motor shaft seal damage. **DO NOT** connect hydraulic motor case drain to a SCV outlet or motor return circuit connection. Contact tractor manufacturer for specific details on “zero pressure return”.

NOTICE

All Hydraulic Requirements: Minimum Pressure 2350 PSI (16200 kPa); Maximum Pressure 3000 PSI (20700 kPa). Check tractor hydraulics to ensure that maximum pressure cannot be exceeded.

Consult your dealer for information on horsepower requirements and tractor compatibility. Requirements vary with tillage system options, tillage, and terrain.

Three dual remote hydraulic outlets (SCV) are required on all sizes of tillage systems. A 12 volt DC electrical system is required on all sizes. Case drain is needed for the air compressor circuit.

TRACTOR PREPARATION AND HOOKUP

1. Back tractor to tillage implement and connect with minimum 1¼" (32 mm) diameter hitch pin. Make sure hitch pin is secured with a locking pin.

NOTE: DO NOT install safety chain using clevis mounting hardware. Safety chain MUST be installed separately.

2. For tillage implements with drawbar hitch, safety chain must be used to keep implement and tractor connected in case of a hitch pin/drawbar failure. Attach safety chain at an unused clevis mounting hole on the implement hitch. Torque hardware to 840 ft-lb (1140 Nm).



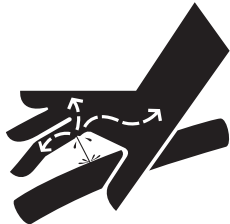
**Tractor and Safety Chain Hookup
for Drawbar Hitch**

NOTICE

Routing of hydraulic hoses from implement to tractor is very important. If done improperly, hoses can be pinched, cut or broken when implement is operated.



WARNING



Pressurized hydraulic fluid can penetrate body tissue and result in death, serious infection, or other injuries. Fluid injected under skin must be **IMMEDIATELY** removed by a surgeon familiar with this type of injury. Make sure connections are tight and hoses and fittings are not damaged before applying system pressure. Leaks can be invisible. Keep away from suspected leaks. Relieve pressure before searching for leaks or performing any system maintenance.

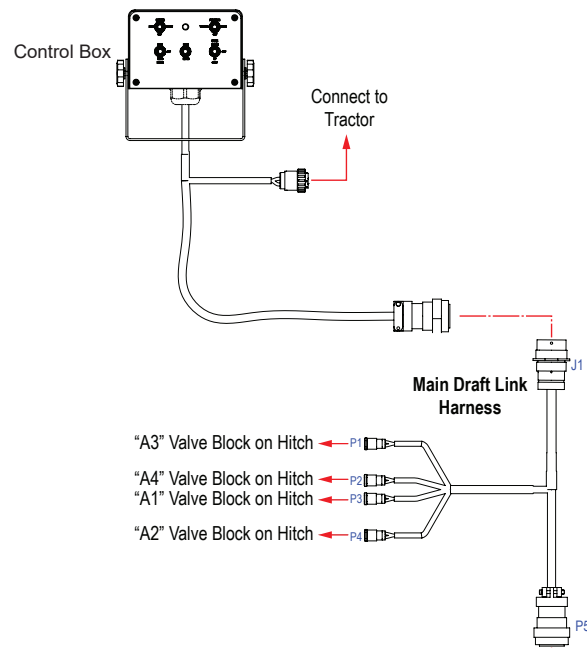
NOTICE

Wipe hose ends to remove any dirt before connecting couplers to tractor ports or contamination may cause equipment failure.

3. Connect hydraulic hoses to tractor ports in a sequence familiar and comfortable to the operator. Refer to chart below.

Color and Label	Machine Function	Hose Size	Hose Function
Red AA	Field Lift (Hydraulic Weight Transfer)	½"	Pressure/Return
Red BB		½"	Pressure/Return
Blue AA	Implement Fold	¾"	Pressure/Return
Blue BB		¾"	Pressure/Return
Black RR	Hydraulic Air Compressor and Wing Down Force	½"	Return
Black PP		½"	Pressure
Orange CD	Hydraulic Air Compressor	¾"	Case Drain

4. For tillage systems not equipped with ISOBUS, connect ASABE Standards 7 terminal connector for safety/warning lights on implement to ASABE Standards receptacle on tractor. If your tractor is not equipped with an ASABE Standards receptacle, check with your tractor manufacturer for availability. Check warning lights on implement work in conjunction with warning lights on tractor.
5. Attach control box connector.



6. Completely raise parking stands, located behind drawbar hitch, to prevent damage to stands and equipment when moving implement.

TRANSPORTING TILLAGE SYSTEM **WARNING**

Uncontrolled movement of equipment can cause loss of control and could result in death, serious injury, or damage to property and equipment. Install all safety pins before transporting equipment.

 WARNING

Uncontrolled machine movement can crush or cause loss of control resulting in death, serious injury, or damage to property and equipment. Install all safety lockup devices before working under or transporting this implement.

 WARNING

Transporting equipment with product in the tanks can cause death, serious injury, and/or damage to property and equipment. Empty all products from the tanks before transport.

 WARNING

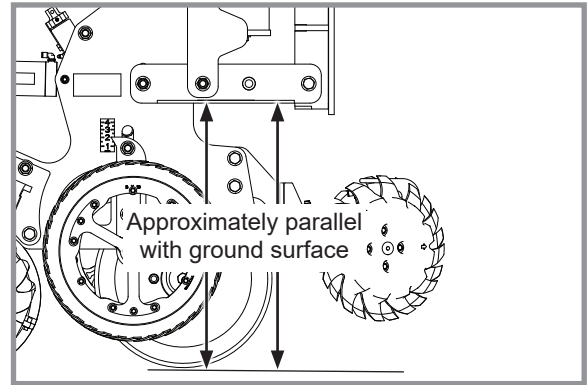
To avoid unintended movement of axle during transport, return all SCV controls to the neutral position before transporting implement. **DO NOT** operate any hydraulic function while transporting machine. Doing so could result in death, serious injury, or damage to property and equipment.

 WARNING

Transport axle can lower from transport position without the use of any controller, causing death, serious injury, or damage to property and equipment. Do not operate any hydraulic function while transporting the implement. Make sure all transport safety lockups are installed on the four transport cylinders and all SCV controls are in their neutral state before transporting, storing and working on the implement.

Make sure safety/warning lights, reflective decals, and SMV sign are in place and visible before transporting implement on public roads. It is your responsibility to check and comply with all federal, state/provincial, and local regulations.

Be aware of road and bridge weight limits. Allow for additional weight of added options and any additional material or substances that have been added to the machine.

LEVEL TILLAGE IMPLEMENT**Clevis Adjustment Holes****Level Row Units**

Toolbar should operate at 23"-25" height from planting surface. Tire pressures must be maintained at pressures specified for tillage system to operate level laterally. Check toolbar and row unit parallel arms are level front to back with implement lowered to proper operating height.

Field and actual planting conditions determine which wheel settings to use to ensure row unit parallel arms are approximately parallel with planting surface.

If implement center is higher or lower than wings after rephasing, contact your Kinze Dealer for valve adjustment or maintenance.

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FIELD OPERATION

Tillage systems are designed to operate within a speed range of 6-10 mph. Speeds above 11 mph are typically not recommended.

NOTICE

Always raise implement out of ground when making sharp turns or backing up.

Normal field tillage operation requires use of tractor's hydraulic control to raise and lower implement frame when making field turnarounds.

UNFOLD AND FOLDING SEQUENCES

NOTICE

Tractor must be in neutral and allowed to roll freely when folding to prevent equipment damage, especially in soft conditions or when loaded with seed or fertilizer. Use tractor assist as needed to aid in folding and to reduce stress on frame and transport components.

NOTICE

DO NOT fold or unfold implement without implement attached to a tractor. DO NOT unhitch implement from tractor unless fully folded for transport or fully unfolded with tillage row units lowered to ground.



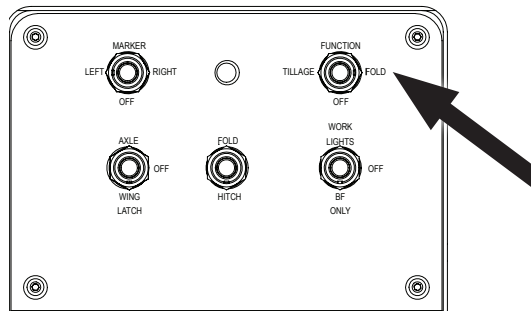
WARNING

Improperly operating or working on this implement could result in death or serious injury. Make sure there is no one in the area of the moving parts of the implement.

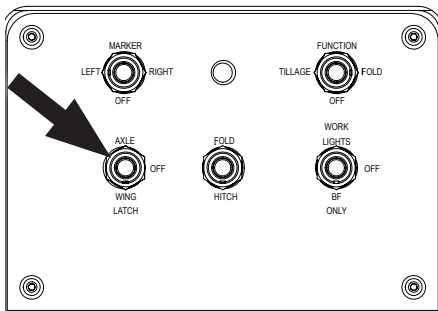
Refer to the following pages for the unfold and folding sequences. See [“Fold” on page 2-16](#); [“Unfold” on page 2-14](#)

Unfold

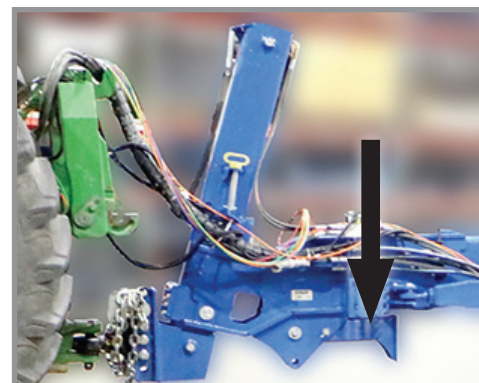
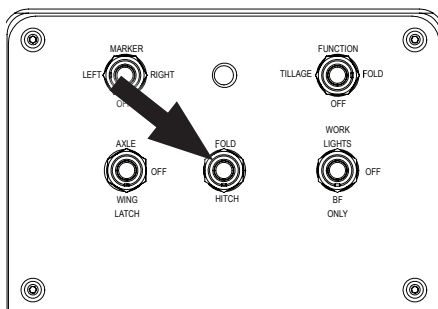
1. Remove the lockups.
[“Transport Axle Cylinder Safety Lockup” on page 2-1](#)
[“Drawbar Hitch Lockup” on page 2-2](#)
[“Wing Latch Lockup” on page 2-3](#)
2. Flip switch over to “FUNCTION FOLD” in control box.



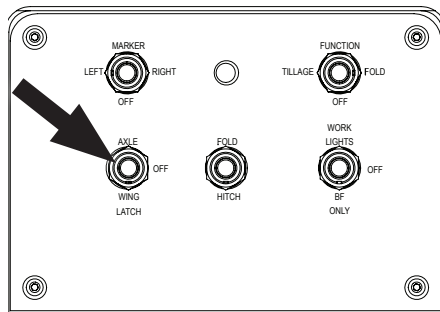
3. Press and hold “AXLE”. Operate proper hydraulic tractor control to lower the transport axle to the field turnaround position.



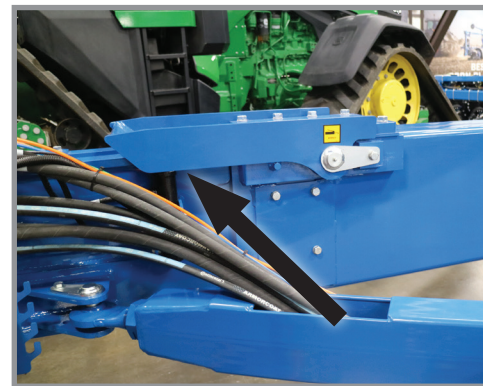
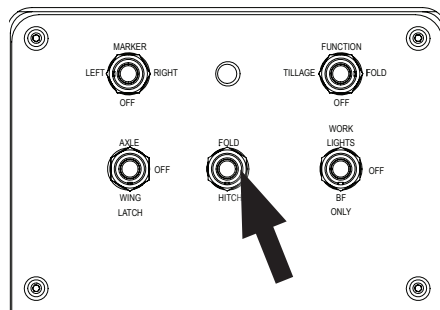
4. Press and hold “HITCH”. Operate proper hydraulic tractor control to lower the hitch.



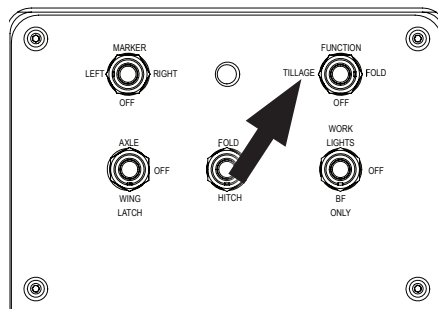
5. Press and hold “WING LATCH”. Operate proper hydraulic tractor control to disengage the wing hooks.



6. Press and hold “FOLD”. Operate proper hydraulic tractor control to fold the wings outward until the outer hitch latches to the inner hitch are sealed into the H-frame receivers.

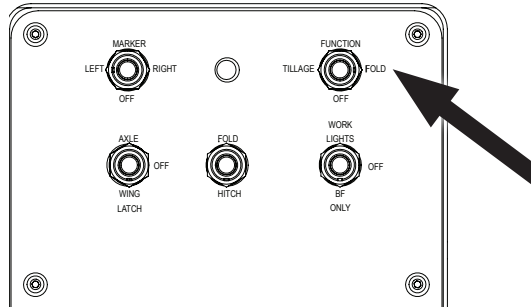


7. Raise the hitch to level the implement during use if necessary.
8. Flip switch over to “FUNCTION TILLAGE”.

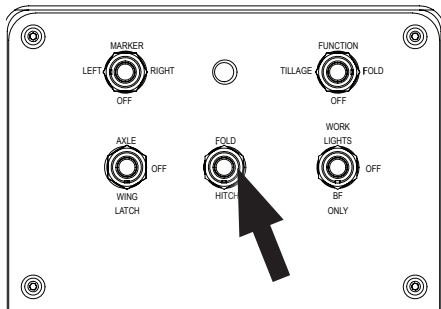


Fold

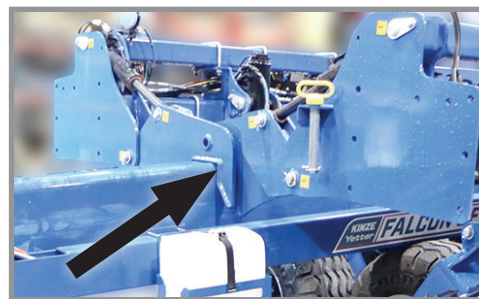
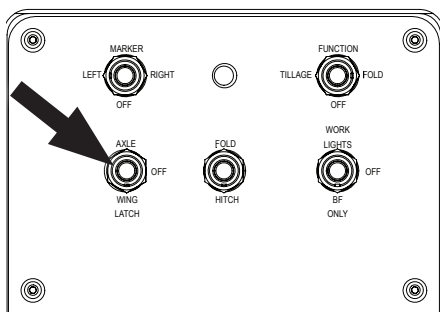
1. Place the implement into the field turnaround position.
2. Flip switch over to “FUNCTION FOLD” in control box.



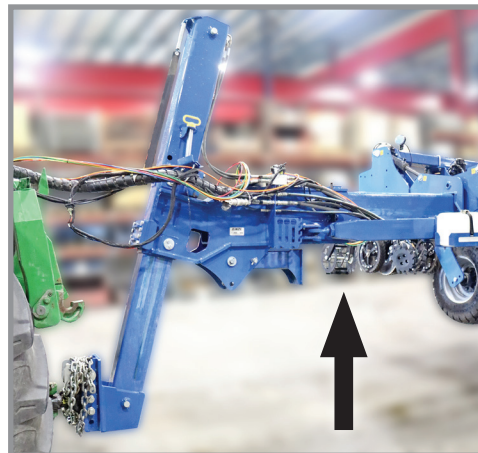
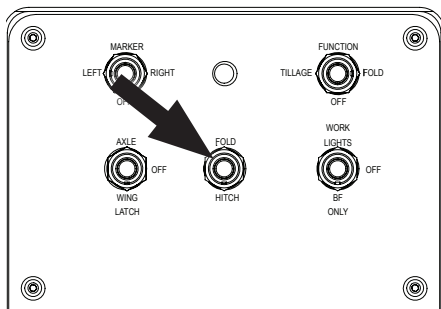
3. Press and hold “FOLD”. Operate proper hydraulic tractor control to fold the wings in toward the tractor.



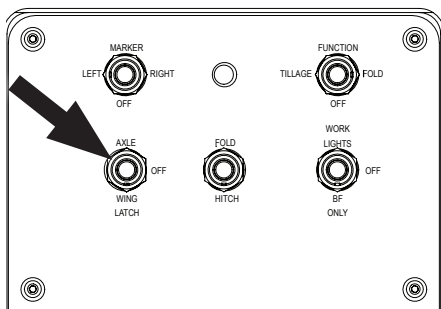
4. Press and hold “WING LATCH”. Operate proper hydraulic tractor control to engage the wing latches around the hitch tube to lock the wings.



5. Press and hold "HITCH". Operate proper hydraulic tractor control to raise the hitch to transport height.



6. Press and hold "AXLE". Operate proper hydraulic tractor control to raise the transport axle to transport height.



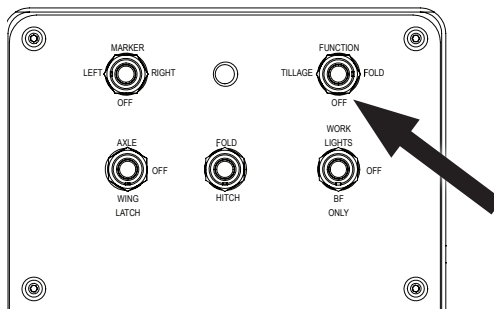
7. Install the lockups.

["Transport Axle Cylinder Safety Lockup" on page 2-1](#)

["Drawbar Hitch Lockup" on page 2-2](#)

["Wing Latch Lockup" on page 2-3](#)

8. Flip switch over to "FUNCTION OFF"



FIELD TEST

Perform a field test with any change of field and/or tillage conditions, seed size or tillage system adjustments to ensure proper strip alignment and operation of row units.

- ☐ Check tillage system for front to rear and lateral level operation. See [“Level Tillage Implement” on page 2-11](#)
- ☐ Check **all** row units to be certain they are running level. Row unit parallel arms should be approximately parallel to the ground when planting.
- ☐ Check for desired depth on **all** rows.
- ☐ Check for proper application rates of fertilizer on **all** rows.

Reinspect implement after field testing.

- ☐ Hoses And Fittings
- ☐ Bolts And Nuts
- ☐ Cotter Pins And Spring Pins

YETTER 2940 AIR ADJUST RESIDUE MANAGER**DANGER**

Serious injury or death may occur if modifications are made to water separator valve, pressure switch, safety relief valve or other components that control tank pressure.

Never make adjustments to components that control tank pressure. Do not make alterations to factory operating pressure settings. Check operation of safety valve on a regular basis and never operate without a factory approved safety valve.

**DANGER**

Serious injury or death may occur if accessories or attachments are operated above the manufacturer's recommended pressure ratings, causing them to explode or fly apart.

Do not use air tools or attachments before reading operator's manual to determine maximum pressure recommendations. Never exceed manufacturer's allowable pressure ratings. Do not use compressor to inflate small low pressure objects such as toys.

**WARNING**

Serious burn injuries could occur from touching exposed metal parts such as compressor head, copper/braided discharge lines, and hydraulic motor during operation and even after compressor is shut down for sometime.

Never touch any of the exposed metal parts during operation and for an extended period of time after air compressor has shut down. Do not attempt maintenance on the unit until it has been allowed to completely cool.

Operation

Failure to properly set the tillage system frame height and levelness can result in less than successful operation of the system and the Yetter product. This may result in damaged equipment. All operators should read and thoroughly understand the instructions given prior to using the Yetter residue managers.

NOTE: DO NOT use this product if the tillage system is not adjusted properly!

For proper operation of tillage attachments, it is imperative that the implement toolbars and strip freshener parallel arms be level side-to-side and front-to-rear. The toolbar frame should operate at a recommended height from the planting surface.

Refer to [“Level Tillage Implement” on page 2-11](#) in the machine operation section of the operator’s manual. Always recheck implement after filling with fertilizer to make sure level hasn’t changed with added weight.

System Start Up Procedure

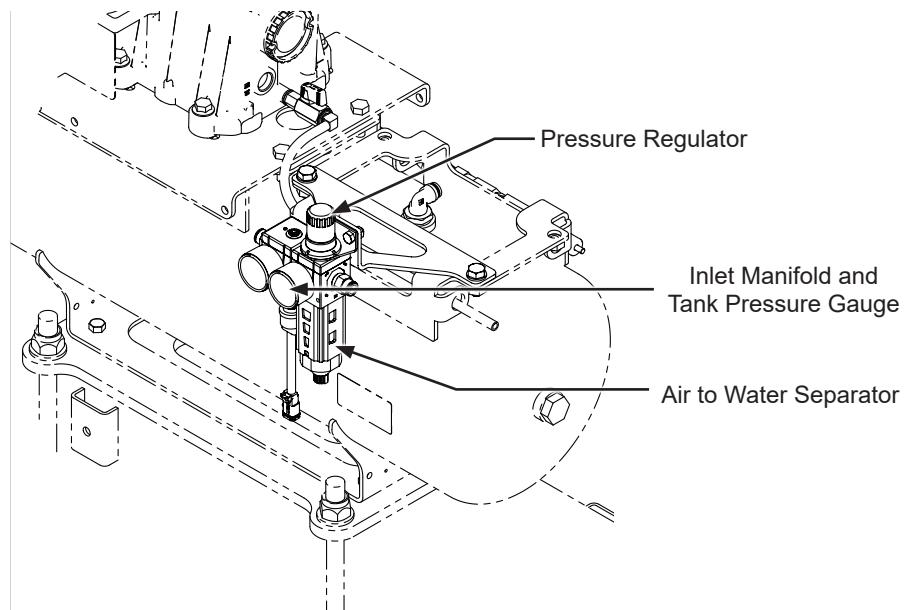
NOTE: For proper operation, the implement frame must operate level (fore, aft, and side to side) and at the correct height.

NOTE: Regularly inspect the residue managers for loose or worn bolts and hardware. Repair or replace as needed.

System startup procedure should be followed every time the system is turned on. This will ensure that component parts of the system are working correctly.

Begin by ensuring the compressor will build pressure and there are no leaks in the system. If the compressor turns on and the system builds pressure the compressor will shut off at 140-145 psi. If 140-145 psi isn’t reached and held while there are no residue manager adjustments being made, there is likely a leak in the system. Check hose connections and walk around tillage system listening for leaks. When compressor has shut off because it reached the appropriate pressure, apply air to the air cylinder to raise all of the residue managers. Allow the compressor to refill if it dropped below 120 psi while doing this. This may or may not happen based on the number of rows on your tillage system (16 rows requires less air to make adjustments when compared to a 36 row).

After it is verified all residue managers went up, choose another pressure and watch to ensure all row cleaners were adjusted to a lower height appropriately.

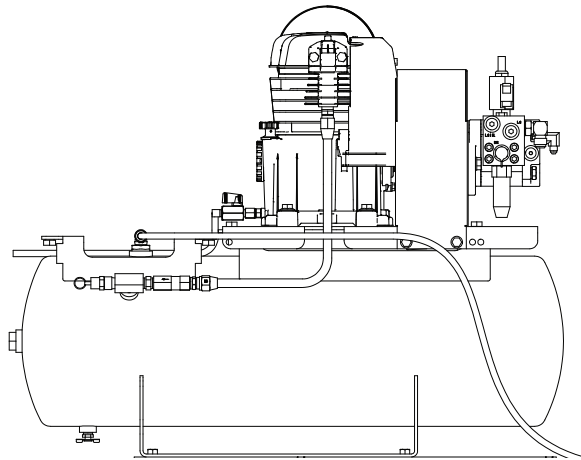
Residue Manger Control Box

Air to Water Separator - Removes water from system before air is delivered to control valves in box.

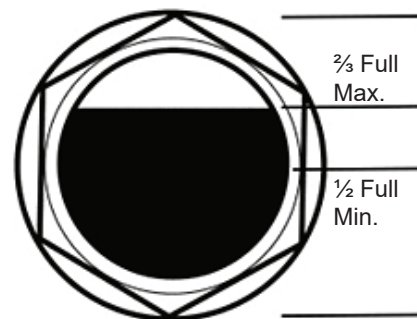
Inlet Manifold and Tank Pressure Gauge - Gauge = 140-145 psi tank full, 120 psi when compressor turns back on.

Pressure Regulator - Sets pressure that goes into control box, should be set between 100-120 psi.

Pressure Switch - Turns on compressor at 120 psi.

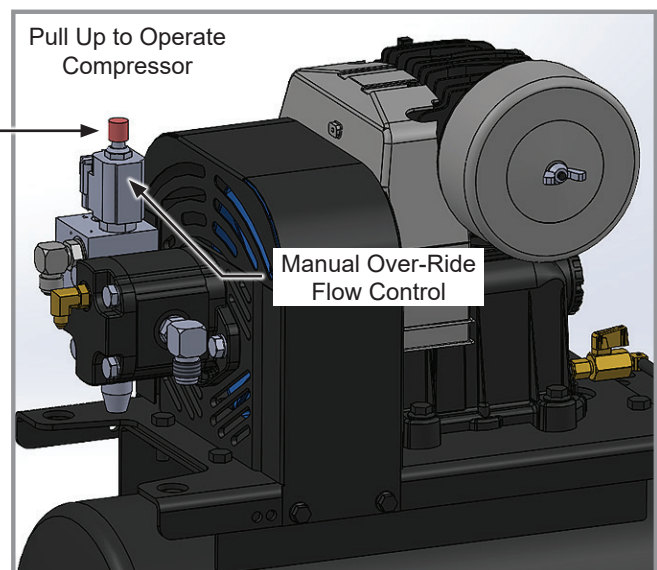
Air Compressor

Prior to daily operation check the oil in the compressor when the implement is on level ground. The oil level can be checked in the clear sight glass on the end of the compressor. Always maintain oil level to read $\frac{2}{3}$ full on the sight glass. Oil levels over this amount can result in oil blowing past rings or through crankcase breather. Lower amounts of oil can result in insufficient lubrication of moving parts.



The compressor has a manual over-ride for troubleshooting, to operate manual override pull up on the knurled knob on hydraulic valve to operate compressor.

When tractor remote or black labeled hoses are engaged it will flow at 4 gpm that the compressor is set to at the factory. If user continues to pull the knob, pressure will eventually relieve at blow off valve at the end of copper tube assembly going to tank. When knob is released, flow stops and compressor ceases operation.

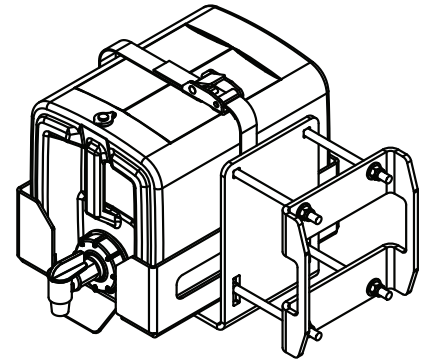


HANDWASHING STATION

NOTICE

Drain tank if environmental conditions are 32° Fahrenheit (0° Celsius) or below to prevent tank from cracking.

The water tank is to only be filled with clean water or preferably potable water (water meeting local standards for drinking). The tank holds 2.5 gallons of water. Be sure to check for regulations pertaining to this use. Tank should be filled with new water at the beginning of each planting season and drained at the end of each planting season.



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**WARNING**

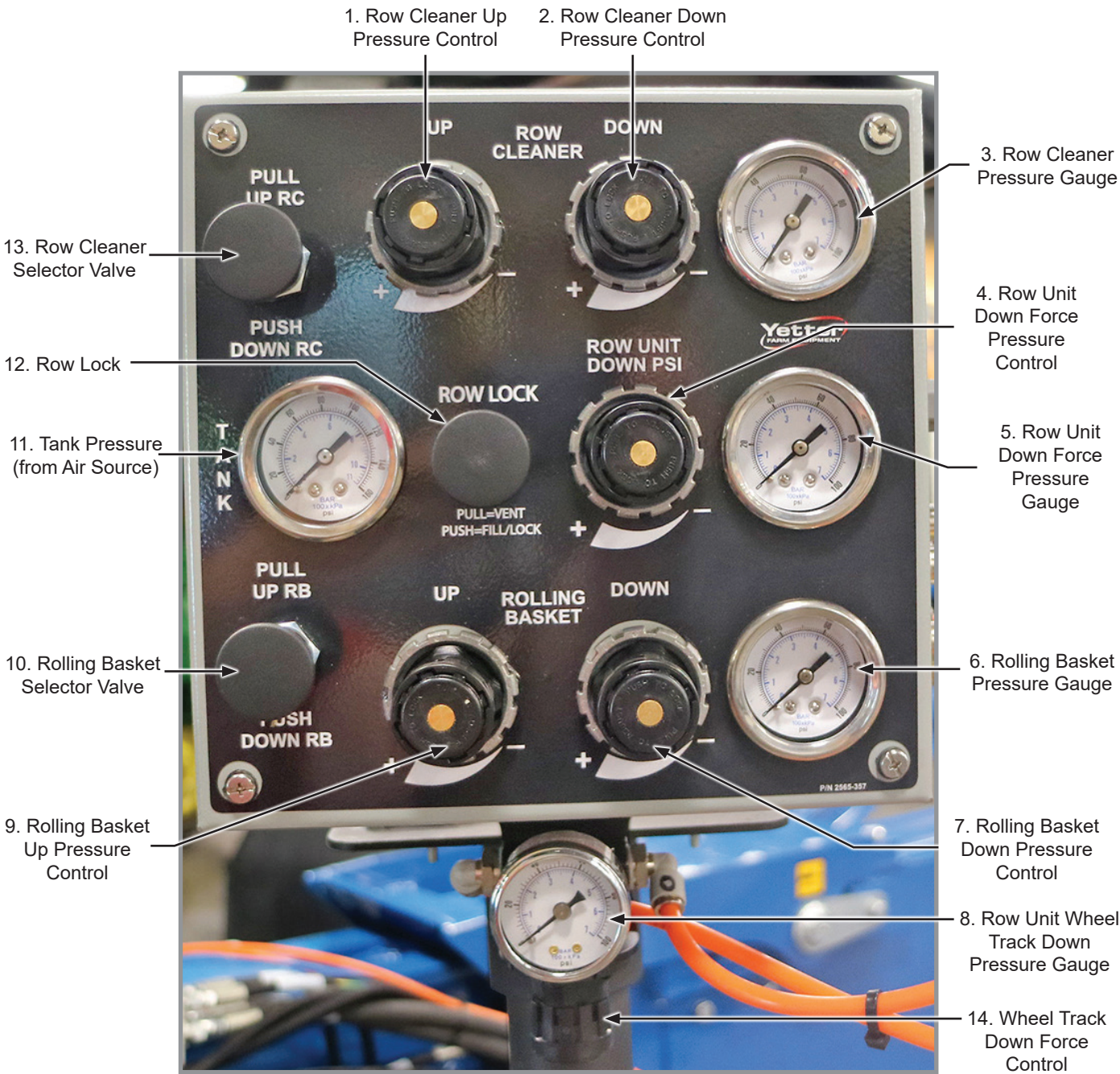
Improperly operating or working on this equipment could result in death or serious injury. Read and follow all instructions in Operator Manual before operating or working on this equipment.

**WARNING**

Falling equipment can cause death or serious injury. Install all lockup devices or lower tillage system to ground before working on equipment.

ROW UNIT CONTROL BOX OVERVIEW

NOTE: Refer to next page with corresponding numbers for descriptions.



Row Unit Control Box

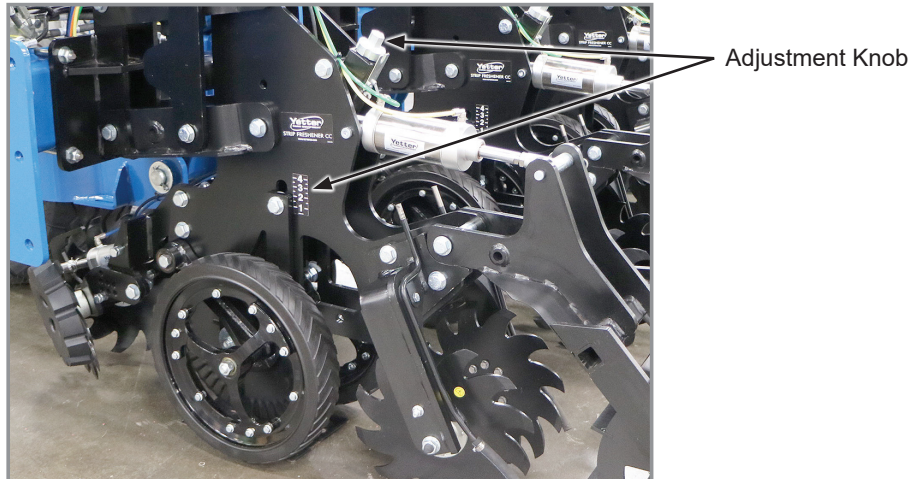
Air Hoses	
Row Unit Down Force	Orange
Row Cleaner Up	Blue
Row Cleaner Down	Black
Closing Wheel Down	Green
Closing Wheel Up	Yellow

-
1. Row Cleaner "UP" Pressure Control - Pull knob to unlock. Turn clockwise to increase air; turn counterclockwise to decrease air. Push knob to lock.
 2. Row Cleaner "DOWN" Pressure Control - Pull knob to unlock. Turn clockwise to increase air; turn counterclockwise to decrease air. Push knob to lock.
 3. Row Cleaner Pressure Gauge - Displays row cleaner PSI.
 4. Row Unit Down Force Pressure Control - Pull knob to unlock. Turn clockwise to increase air; turn counterclockwise to decrease air (must also pull row lock knob to decrease air). Push knob(s) to lock.
 5. Row Unit Down Force Pressure Gauge - Displays row unit down force PSI.
 6. Rolling Basket Pressure Gauge - Displays rolling basket pressure PSI.
 7. Rolling Basket Down Pressure Control - Pull knob to unlock. Turn clockwise to increase air; turn counterclockwise to decrease air. Push knob to lock.
 8. Row Unit Wheel Track Down Pressure Gauge - Displays down force pressure for the center frame row units.
 9. Rolling Basket UP Pressure Control - Pull knob to unlock. Turn clockwise to increase air; turn counterclockwise to decrease air. Push knob to lock.
 10. Rolling Basket Selector Valve - Pull "UP" to apply air to up pressure side of rolling basket air cylinder. Push "DOWN" to apply air to down pressure side of rolling basket cylinder.
 11. Tank Pressure (from Air Source) - Minimum of 100 PSI and maximum of 145 PSI.
 12. Row Lock - Pull "UP" to vent air in row unit down force circuit. Push "DOWN" to lock air in row unit down force circuit.
 13. Row Cleaner Selector Valve - Pull "UP" to apply air to up pressure side of row cleaner cylinder. Push "DOWN" to apply air to down pressure side of row cleaner cylinder.
 14. Row Cleaner Selector Valve - Controls down force pressure for the center frame row units separately from the row units on L.H. and R.H. wings.

ROW UNIT DEPTH ADJUSTMENT

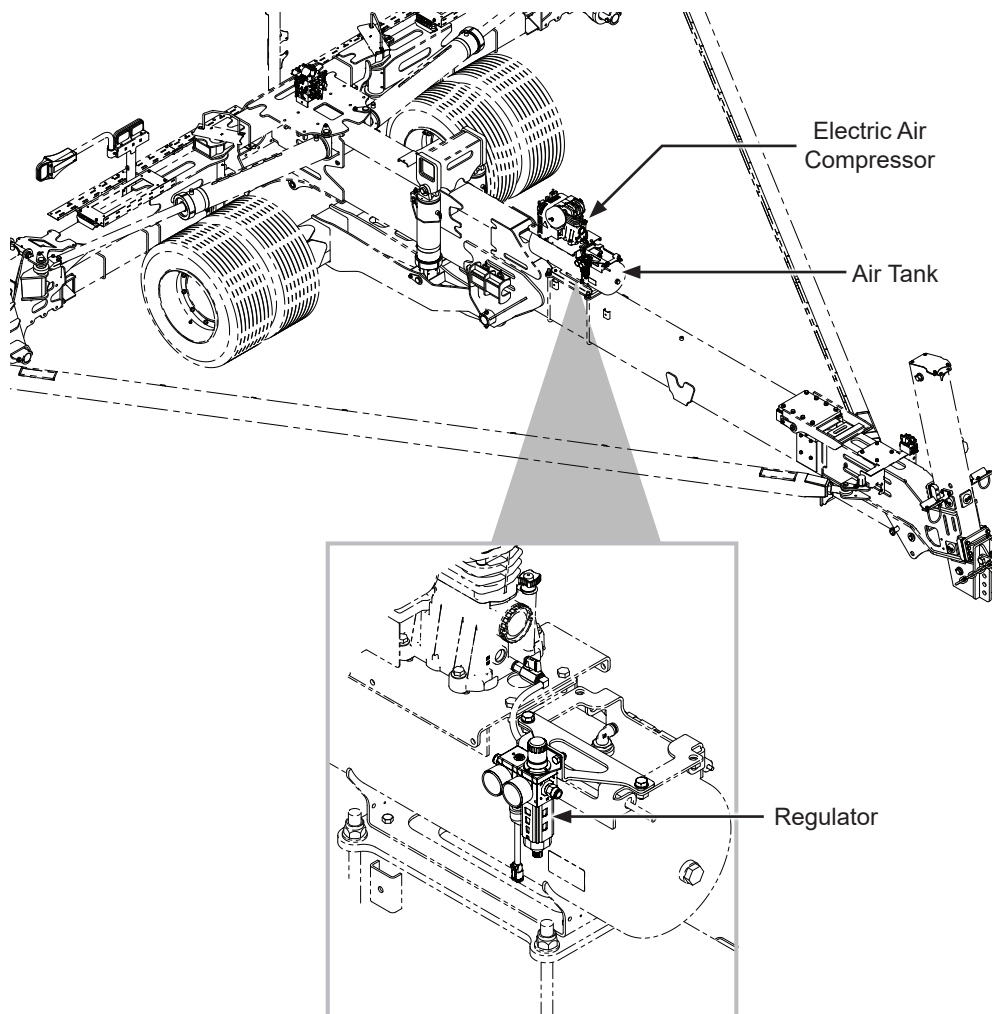
Set approximate depth on each row unit, use adjustment knob to achieve preferred depth. Adjustments can be made in $\frac{1}{4}$ " increments; rotate knob clockwise to raise gauge wheels making units deeper, rotate knob counterclockwise to lower gauge wheels making units shallower.

NOTE: The depth decal on side of row unit is reference only, not actual depth. 3 does NOT mean 3" deep. Actual depth is determined by how low the cutting coulter is below gauge wheels. Row cleaner and rolling basket settings will also impact depth.

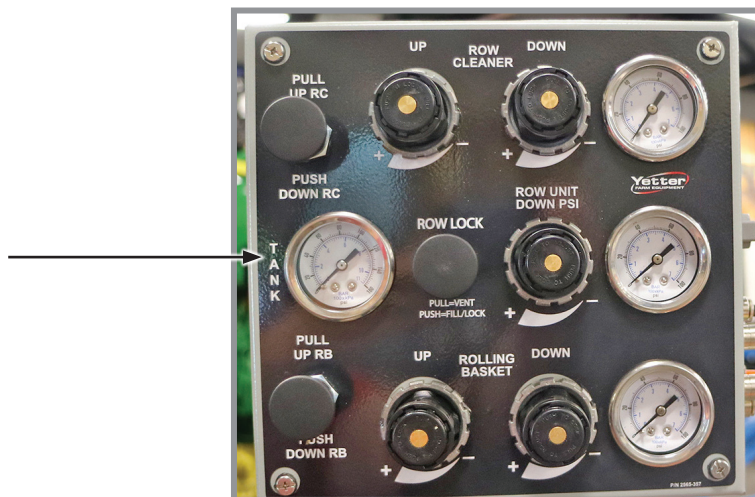


PNEUMATIC DOWN PRESSURE (PDP)

Turn all regulators to 0psi by rotating them all counterclockwise until they stop. Engage toolbars compressor source.



Tank pressure should always be above 100psi.



Row Unit Control Box

FIELD OPERATION

NOTE: Adjust down pressure with tillage system lowered and row openers in ground for most accurate adjustment. Pressure can be adjusted using your cab control box.



ADJUST DOWN PRESSURE FROM CAB

Use the control box to adjust down pressure.

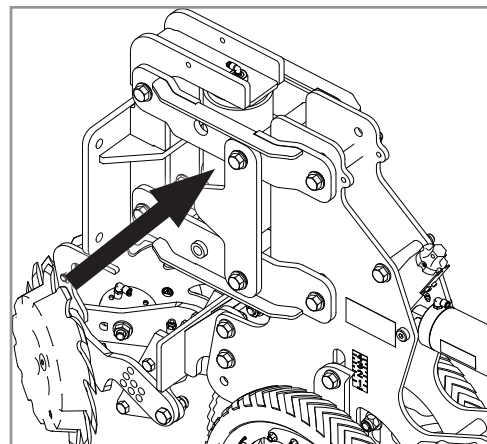
ROW UNIT PNEUMATIC DOWN FORCE

Apply row unit down force to both wing row units and center section row units using the regulator under row unit control box. Adjust until each row units ride is consistent, smooth, and correct depth is achieved.

TYPICAL PNEUMATIC OPERATING SETTINGS

	Freshening Existing Strips	Making New Strips
Row Unit Down Force	20-35 PSI	30-60 PSI

NOTE: Adjustments outside of these ranges may be necessary for optimal performance depending on conditions.



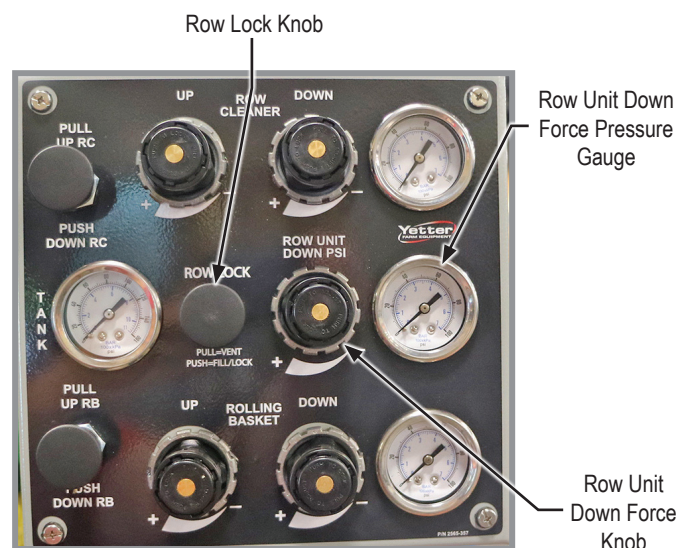
Row Unit Air Spring

Row unit down force should NEVER be above 100psi.

NOTE: Row unit down force may need readjusted once the residue managers and rolling basket are properly set.

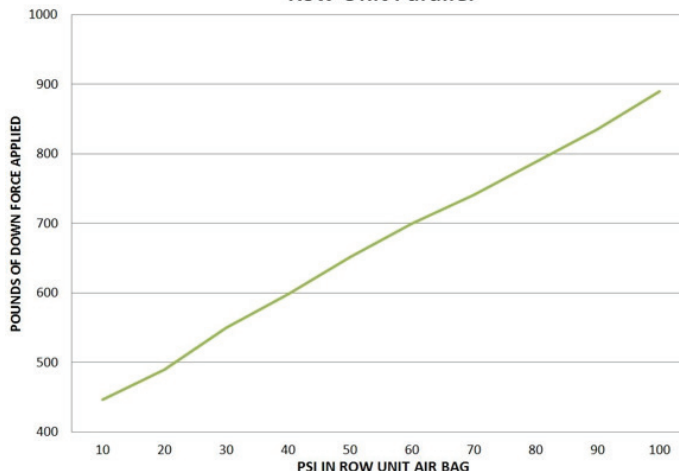
The row unit lock knob should be pressed in during operation.

To lower down force, adjust "Row Unit Down Force" knob counterclockwise, pull "Row Lock" knob for 3-5 seconds, push knob back in. Repeat as needed until desired PSI is achieved. To add down force, unlock regulator knob and rotate clockwise to desired pressure, push regulator knob back in.



Row Unit Control Box

Row Unit Parallel



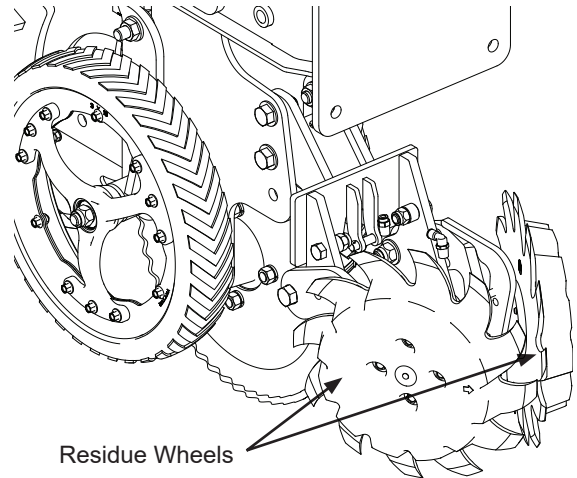
RESIDUE MANAGER ADJUSTMENTS

Residue managers are used to clean residue without engaging the soil. Fine tune residue managers by applying up or down pressure.

TYPICAL PNEUMATIC OPERATING SETTINGS

	Freshening Existing Strips	Making New Strips
Residue Managers	0-40 PSI "UP"	0-25 PSI "DOWN"

NOTE: Adjustments outside of these ranges may be necessary for optimal performance depending on conditions.



Push/Pull row cleaner regulator knob will be pushed in to adjust down pressure and pulled out to adjust up pressure. Pull regulator knobs to unlock, adjust row cleaner adjustment knob counterclockwise to decrease pressure and clockwise to increase pressure.



ROW CLEANER DO'S AND DON'TS

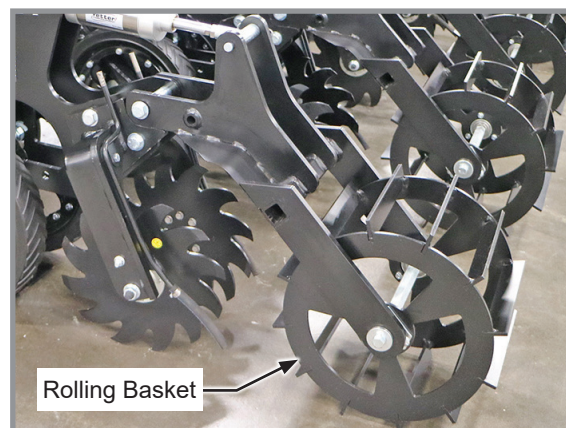
1. DO NOT use as a tillage tool; Residue Managers are designed to move crop residue and to break up clods and crust.
2. DO NOT operate tillage at slow speeds. Ground speed affects how aggressive the residue manager wheels are. Operate at sufficient speed (refer to you OEM planter manufacturer manual) to maintain good residue flow.
3. DO NOT expect 100% of crop residue to be cleared, it is not necessary and would necessitate engaging the soil. The width of path cleared depends on ground conditions, depth setting, and ground speed.
4. DO expect to see wheels occasionally quit turning, indicating ideal (shallow) setting which is not moving soil.
5. DO adjust toolbar frame height and drawbar correctly. It is very important to ensure row unit will follow ground contours properly.
6. DO grease the hub cavity of the bearings regularly. Even though the bearings are sealed, filling the hub keeps moisture, dirt, and debris from entering the hub and ruining the seal.

ROLLING BASKET ADJUSTMENTS

Apply down pressure to rolling basket to condition strip and incorporate fertilizer if applicable.

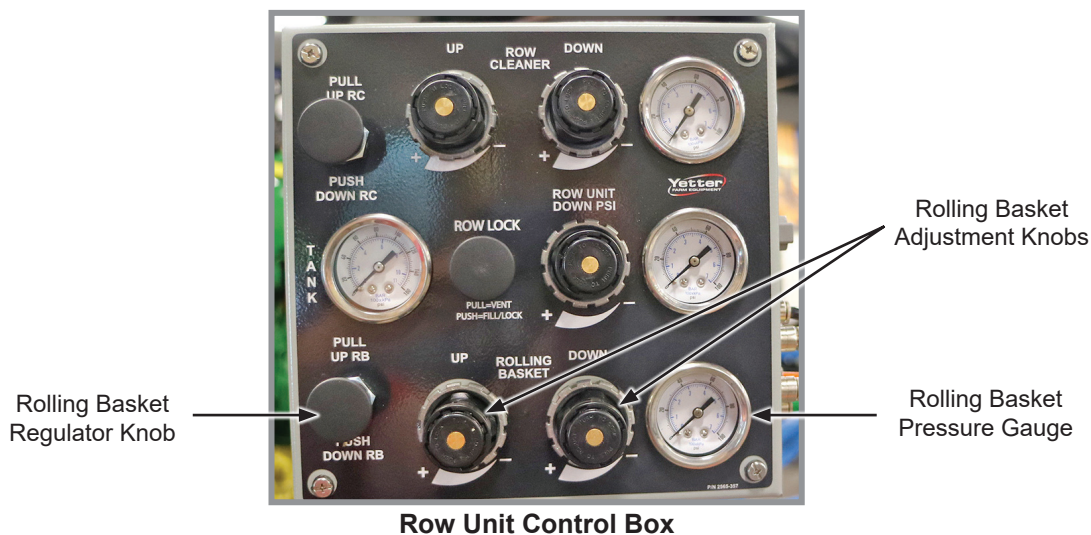
TYPICAL PNEUMATIC OPERATING SETTINGS

	Freshening Existing Strips	Making New Strips
Rolling Basket	30-40 PSI "DOWN"	30-40 PSI "DOWN"
NOTE: Adjustments outside of these ranges may be necessary for optimal performance depending on conditions.		



Once all other pressures, depths, and levelness are adjusted properly, adjust the rolling basket pressure. Push/pull rolling basket regulator knob will be pushed in to adjust down pressure and pulled out to adjust up pressure. Pull regulator knobs to unlock, adjust rolling basket adjustment knob counterclockwise to decrease pressure and clockwise to increase pressure.

Recheck depth of each row unit and adjust as needed. Check depth on each row by removing loose soil until bottom of each strip is found. For most accurate measurements, remove residue away from top of soil surface next to each strip where measuring from bottom of each strip to top of soil surface.



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SYSTEM OVERVIEW



WARNING



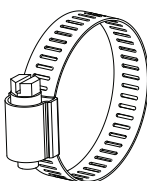
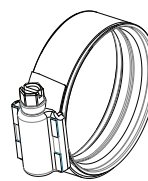
Agricultural chemicals can cause death or serious injury to persons, animals, and plants or seriously damage soil, equipment, or property. Read and follow all chemical and equipment manufacturers labels and instructions.



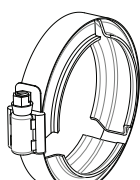
CAUTION

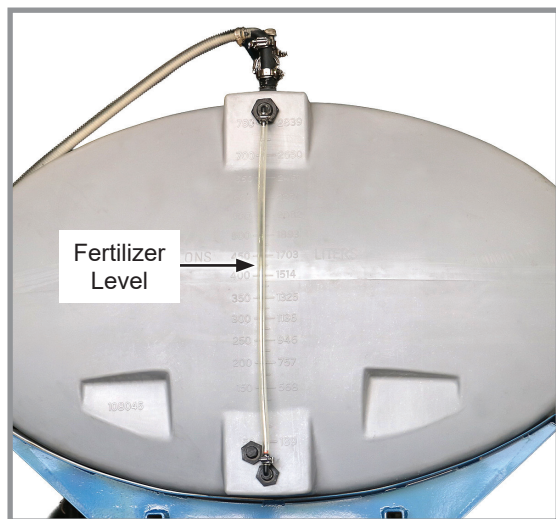
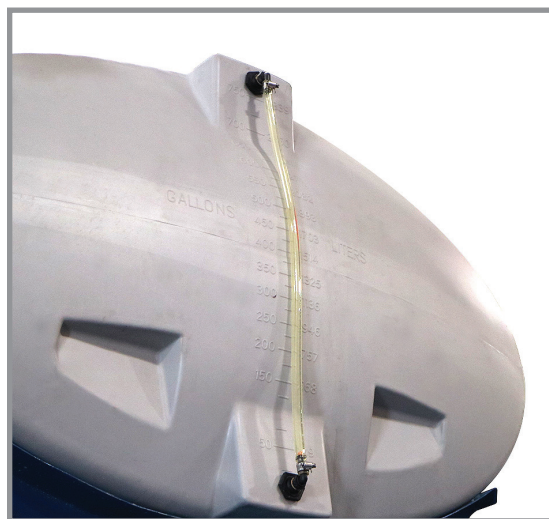
Overfilling tank can cause siphoning, tank collapse, personal injury, and damage to property and equipment. Do not overfill tank. Do not leave implement unattended when filling tank. Close fill valve and open tank lid if siphoning occurs. Follow all chemical manufacturers first aid, cleanup, and handling instructions.

Hose Clamp Torque Values Chart

 Standard	 Heavy Duty	Diameter	Standard	Heavy Duty
		1¼"	42 in-lb	75 in-lb
		1½"	42 in-lb	75 in-lb
		2"	42 in-lb	X
		3"	42 in-lb	X

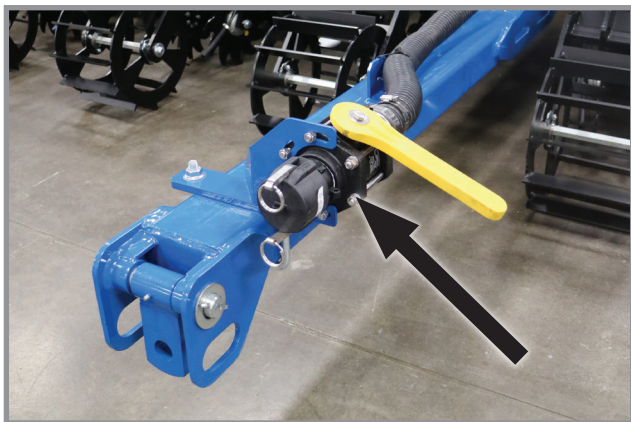
Flange Clamp Torque Values Chart

	Diameter	Torque
	1"	50-60 in-lb
	2"	90-100 in-lb
	3"	100-125 in-lb

FERTILIZER TANK**24 Row - Front View****24 Row - Rear View****Fertilizer Level Sight Glass**

Indicates how much liquid is left in fertilizer tank(s). Tillage system must be on level ground to get an accurate level.

AUXILIARY PLUMBING FOR LIQUID FERTILIZER



Rear Trailer Hitch Auxiliary Plumbing



Front Hitch Auxiliary Plumbing

Rear trailer hitch is used to tow a 3 or 4 wheel wagon behind tillage system. Hitch height during field operation and transport is 15". Hitch height will raise to approximately 42" when implement is lifted.

NOTICE

Rear trailer hitch is designed for use with diaphragm pump only. Maximum allowable hitch weight is 200 lb (90.71kg). Do not exceed 6,000 lb (2,721.55 kg) gross towing weight or the equivalent of a loaded 500 gal (1,892.7 L) tank and running gear or equipment can be damaged.

NOTE: Periodically check feed hose for kinks to prevent restricted delivery rate.

Front Hitch auxiliary plumbing is used to connect to tractor tanks.

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NOTICE

Disconnect all electronic monitor and control modules prior to making any repairs or modifications to the tillage system or mounted attachments. Failure to do so will result in permanent damage to sensitive electronic components and could void your warranty.

NOTICE

Do not pressure wash any electronic modules directly. Direct pressure washing will result in permanent damage to sensitive electronic components and could void your warranty.

LUBRICATION

Following pages show locations of all lubrication points. Proper lubrication of moving parts helps ensure efficient operation of your Falcon SF700 Tillage system and prolongs the life of friction producing parts.

LUBRICATION SYMBOLS



Lubricate at frequency indicated with SAE multipurpose grease.



Lubricate at frequency indicated with high quality SAE 10 weight oil or spray lubricant.

WHEEL BEARINGS

All transport and wing hub wheel bearings should be repacked annually and checked for wear.

1. Raise wheel off ground.
2. Check for bearing endplay by moving wheel side to side.
3. Rotate wheel to check for bearing roughness. If bearings sound rough, remove hub and inspect bearings.

NOTE: To repack wheel hubs, follow procedure outlined for wheel bearing replacement in this section except bearings and bearing cups are reused.

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GREASE FITTINGS

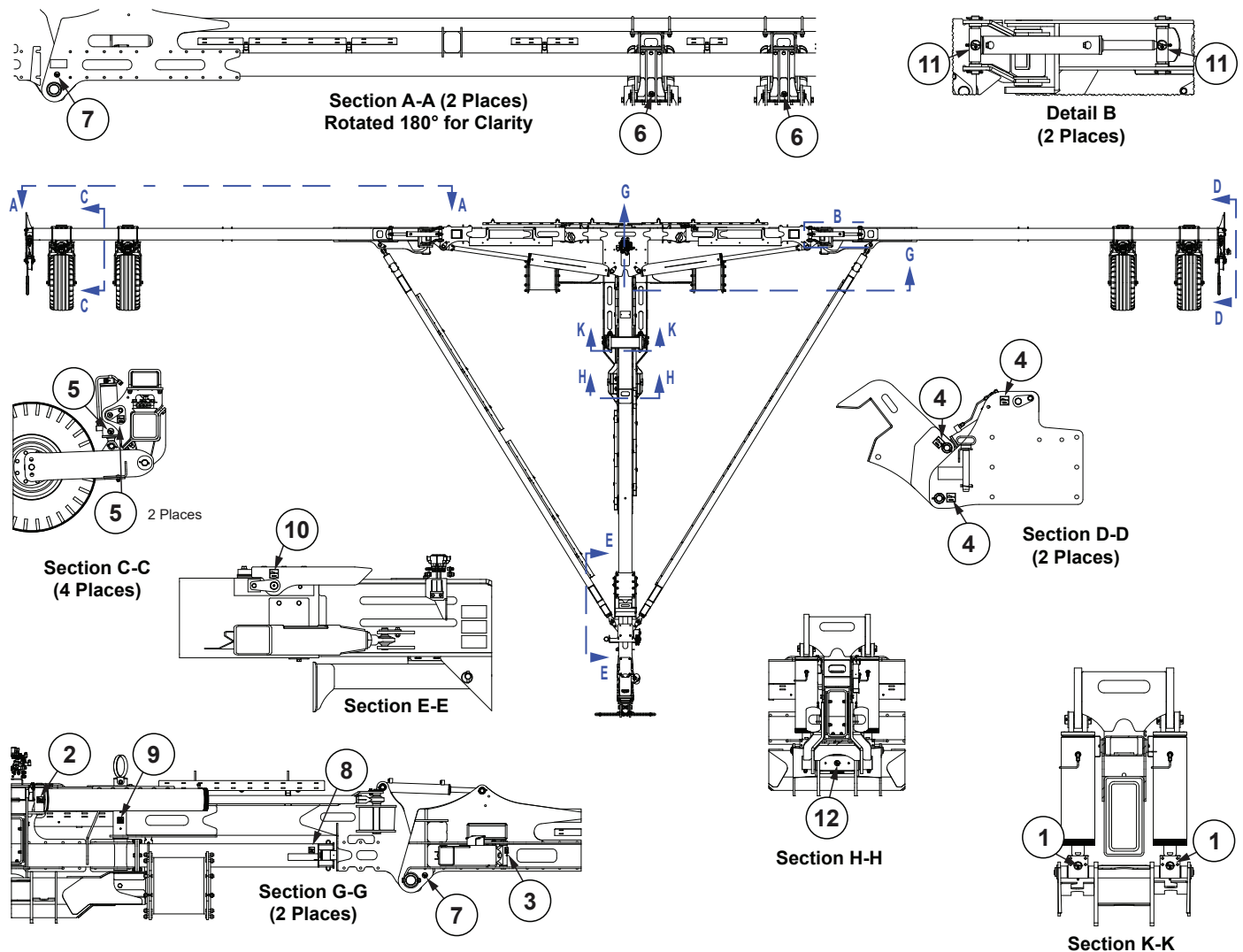


WARNING



Uncontrolled movement of equipment can cause loss of control and could result in death, serious injury, or damage to property and equipment. Install all safety lockup devices before transporting implement.

Parts equipped with grease fittings should be lubricated at frequency indicated with an SAE multipurpose grease. Clean fitting thoroughly before using grease gun. Frequency of lubrication recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent attention.

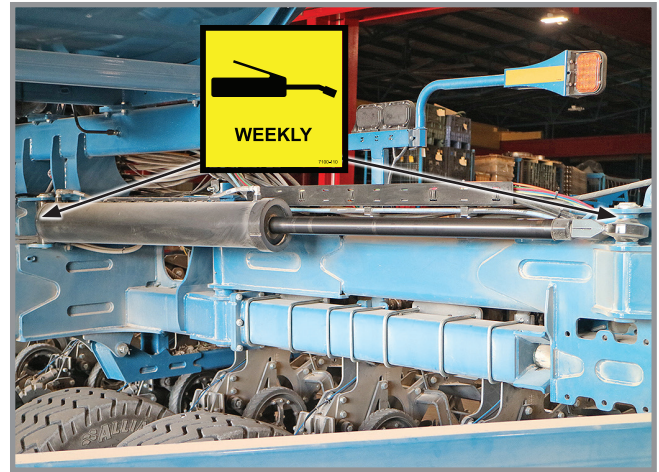


NOTE: Shown with no row units or row markers.

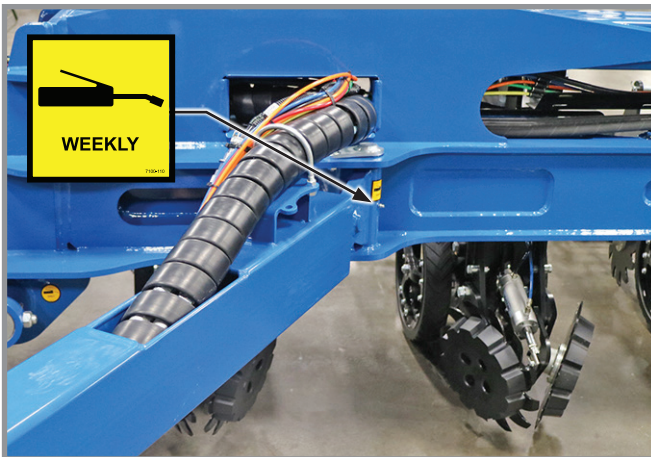
NOTE: Numbers on illustration above correspond to photos on following pages showing lubrication frequencies.



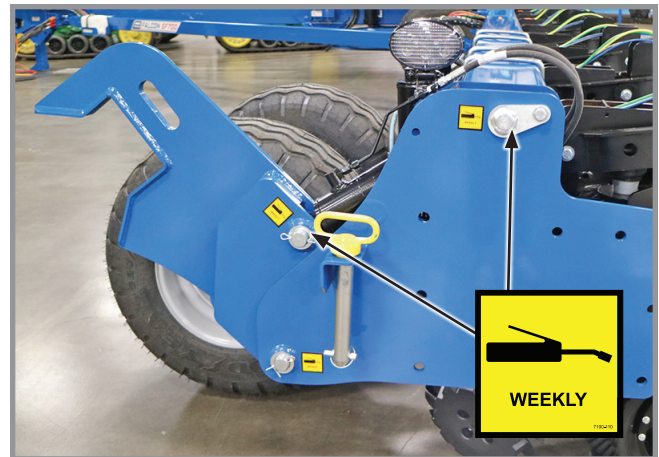
**1. Lift Cylinders, 2 per machine
1 fitting per cylinder**



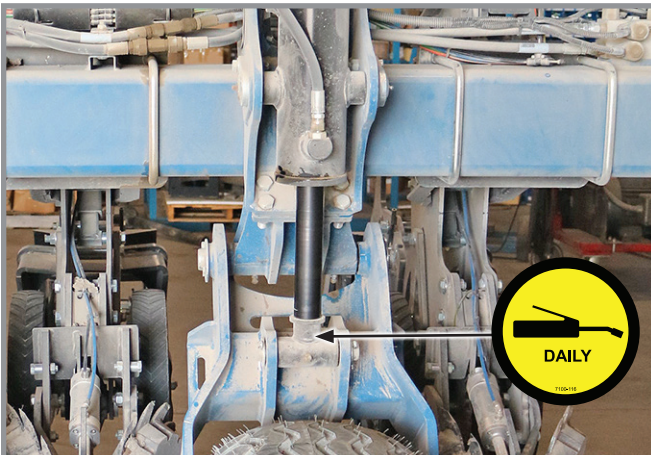
**2. Wing Fold cylinders, 4 per machine
2 fittings per cylinder (one each end)**



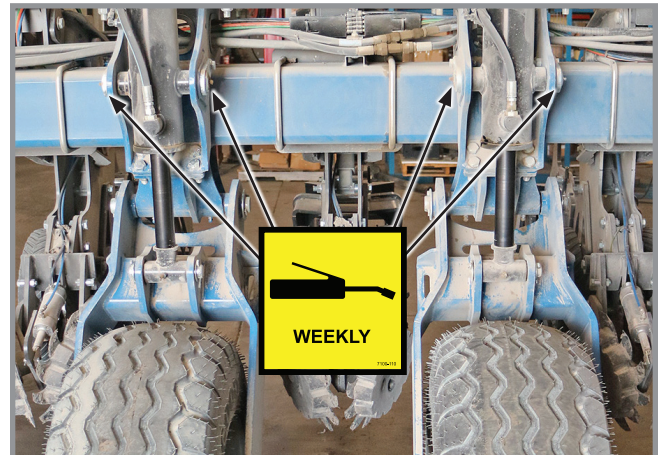
**3. Draft Link, 2 per machine
1 fitting per link**



**4. Wing Latch cylinders, 2 per machine
2 fittings per cylinder (one each end)**

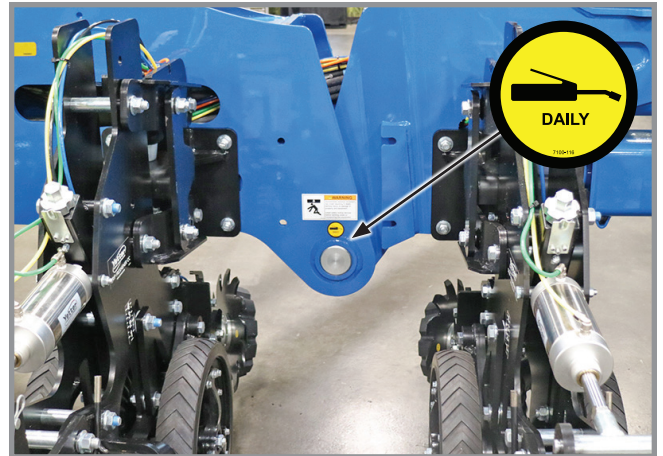


**5. Lift Cylinders, 2 or 4 per machine
3 fittings per cylinder**

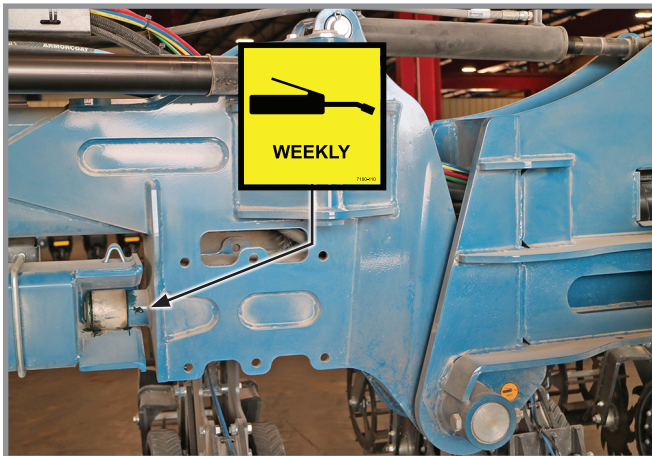




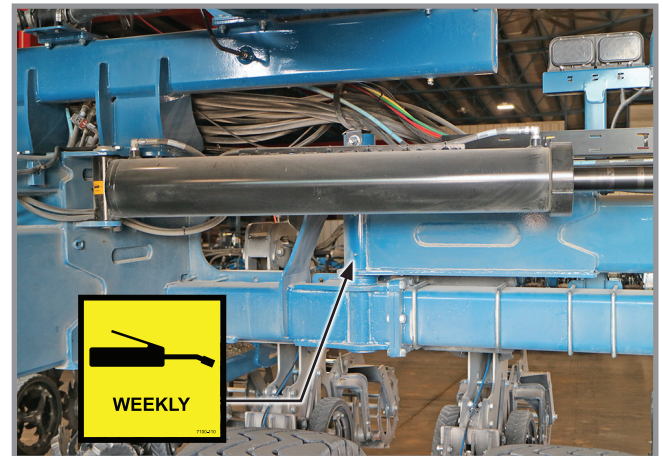
6. Wheel modules, 2 or 4 per machine
2 fittings per module



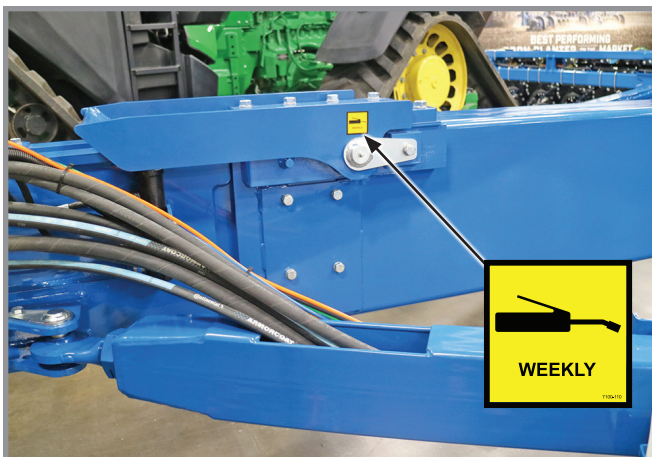
7. Wing pivot, 2 per machine
2 fittings per pivot



8. Stub Wing Roller, 2 per machine
1 fitting per roller



9. Wing Fold Pivot, 2 per machine
2 fittings per wing

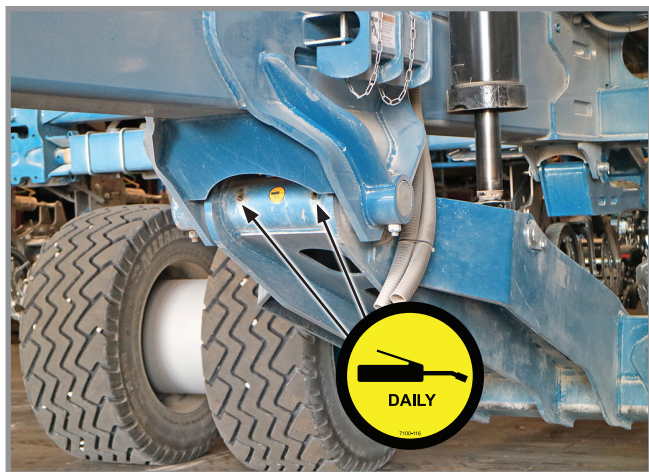


10. Hitch Latch, 2 fittings per machine

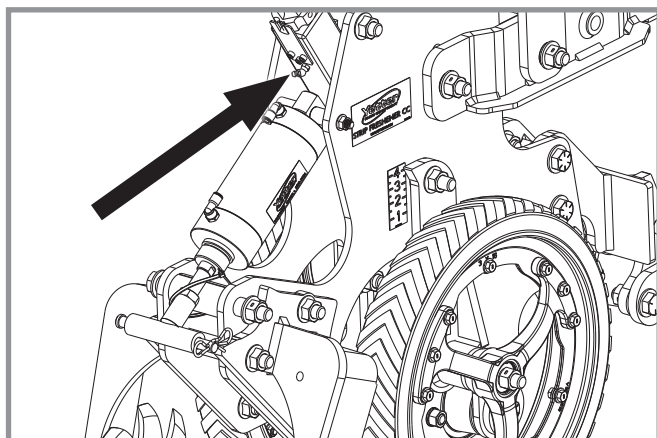


11. Wing Down Pressure Cylinders, 2 per machine
2 fittings per cylinder

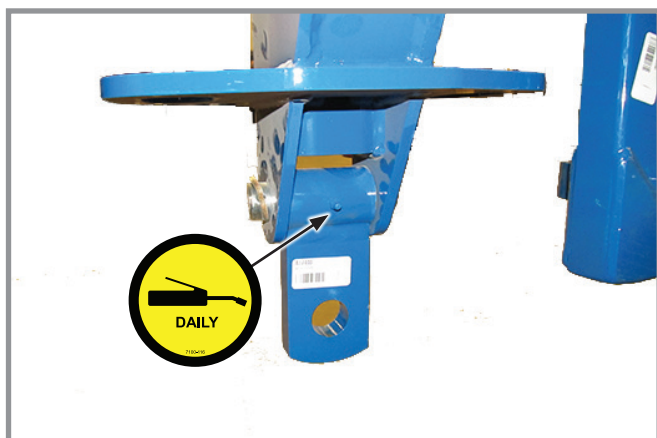
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12. Axle Pivot, 2 per machine



**Row Unit Depth Adjust
1 fitting per Row Unit**



**Trailer Hitch
1 fitting**



**Drawbar Hitch
2 fittings**

MOUNTING BOLTS AND HARDWARE

Before operating tillage system for the first time, check all hardware is tight. Check all hardware again after first 50 hours of operation and beginning of each planting season.

All hardware used on the Kinze planter is Grade 5 (high strength) unless otherwise noted. Grade 5 cap screws are marked with three radial lines on the head. Hardware must be replaced with equal size, strength, and thread type.



WARNING



Loose transport wheel lug bolts can result in wheel separation from tillage system and result in death, serious injury, and damage to property and equipment. Check transport wheel lug nut torque before operating implement for the first time and periodically thereafter.

NOTICE

Over-tightening hardware can reduce its shock load capacity and cause equipment failure.

TORQUE VALUES CHART - PLATED HARDWARE

	Grade 2 (No marks) 		Grade 5 (3 marks) 		Grade 8 (6 marks) 	
Diameter	Coarse	Fine	Coarse	Fine	Coarse	Fine
1/4"	50 in-lb	56 in-lb	76 in-lb	87 in-lb	9 ft-lb (12 N-m)	10 ft-lb (14 N-m)
5/16"	8 ft-lb (11 N-m)	9 ft-lb (12 N-m)	13 ft-lb (18 N-m)	14 ft-lb (19 N-m)	18 ft-lb (24 N-m)	20 ft-lb (27 N-m)
3/8"	15 ft-lb (20 N-m)	17 ft-lb (23 N-m)	23 ft-lb (31 N-m)	26 ft-lb (35 N-m)	33 ft-lb (45 N-m)	37 ft-lb (50 N-m)
7/16"	25 ft-lb (34 N-m)	27 ft-lb (37 N-m)	37 ft-lb (50 N-m)	41 ft-lb (56 N-m)	52 ft-lb (71 N-m)	58 ft-lb (79 N-m)
1/2"	35 ft-lb (48 N-m)	40 ft-lb (54 N-m)	57 ft-lb (77 N-m)	64 ft-lb (87 N-m)	80 ft-lb (108 N-m)	90 ft-lb (122 N-m)
9/16"	50 ft-lb (68 N-m)	60 ft-lb (81 N-m)	80 ft-lb (108 N-m)	90 ft-lb (122 N-m)	115 ft-lb (156 N-m)	130 ft-lb (176 N-m)
5/8"	70 ft-lb (95 N-m)	80 ft-lb (108 N-m)	110 ft-lb (149 N-m)	125 ft-lb (169 N-m)	160 ft-lb (217 N-m)	180 ft-lb (244 N-m)
3/4"	130 ft-lb (176 N-m)	145 ft-lb (197 N-m)	200 ft-lb (271 N-m)	220 ft-lb (298 N-m)	280 ft-lb (380 N-m)	315 ft-lb (427 N-m)
7/8"	125 ft-lb (169 N-m)	140 ft-lb (190 N-m)	320 ft-lb (434 N-m)	350 ft-lb (475 N-m)	450 ft-lb (610 N-m)	500 ft-lb (678 N-m)
1"	190 ft-lb (258 N-m)	205 ft-lb (278 N-m)	480 ft-lb (651 N-m)	530 ft-lb (719 N-m)	675 ft-lb (915 N-m)	750 ft-lb (1017 N-m)
1 1/8"	265 ft-lb (359 N-m)	300 ft-lb (407 N-m)	600 ft-lb (814 N-m)	670 ft-lb (908 N-m)	960 ft-lb (1302 N-m)	1075 ft-lb (1458 N-m)
1 1/4"	375 ft-lb (508 N-m)	415 ft-lb (563 N-m)	840 ft-lb (1139 N-m)	930 ft-lb (1261 N-m)	1360 ft-lb (1844 N-m)	1500 ft-lb (2034 N-m)
1 3/8"	490 ft-lb (664 N-m)	560 ft-lb (759 N-m)	1100 ft-lb (1491 N-m)	1250 ft-lb (1695 N-m)	1780 ft-lb (2413 N-m)	2030 ft-lb (2752 N-m)
1 1/2"	650 ft-lb (881 N-m)	730 ft-lb (990 N-m)	1450 ft-lb (1966 N-m)	1650 ft-lb (2237 N-m)	2307 ft-lb (3128 N-m)	2670 ft-lb (3620 N-m)

NOTE: Torque unplated hardware and bolts with lock nuts approximately 1/3 higher than above values. Torque bolts lubricated prior to installation to 70% of value shown in chart.

SPECIAL TORQUE VALUES AND INSTRUCTIONS

5/8" - 18 Wheel Lug Nuts and Lug Bolts	200 ft-lb (271 N-m)
9/16" - 18 Wheel Lug Nuts and Lug Bolts	125 ft-lb (169 N-m)
Master Cylinder - 1/2"-13 Hex Socket Head Cap Screws (24 Row 20" / 24 Row 22" / 16 Row 30" Only)	125 ft-lb (169 N-m)

CYLINDER ROD PISTON RETAINING NUT TORQUE CHART

	Non-Nylock Nut	Nylock Nut
1/2"-20	55-70 ft-lb (75-95 N-m)	45-55 ft-lb (61-75 N-m)
3/4"-16	115-125 ft-lb (156-169 N-m)	100-115 ft-lb (136-156 N-m)
7/8"-14	150-180 ft-lb (203-244 N-m)	130-150 ft-lb (176-203 N-m)
1"-14	275-330 ft-lb (373-447 N-m)	250-275 ft-lb (339-373 ft-lb)
1 1/8"-12	300-375 ft-lb (407-508 N-m)	275-300 ft-lb (373-407 N-m)
1 1/4"-12	300-375 ft-lb (407-508 N-m)	275-300 ft-lb (373-407 N-m)

TIRE PRESSURE

**WARNING**



Explosive separation of rim and tire parts can cause death or serious injury. Overinflation, rim and tire servicing, improper use of rims and tires, or worn or improperly maintained tires could result in a tire explosion.

- Maintain proper tire pressure. Inflating a tire above or below the recommended pressure can cause tire damage.
- Mount tires only by properly trained personnel using proper equipment.
- Replace tires with cuts or bubbles. Replace damaged rims. Replace missing lug bolts and nuts.
- Do not weld or heat wheel assembly. Heating increases tire pressure.

TRANSPORT TIRES

**WARNING**



Overinflation of tires can result in explosive separation of rim and tire and cause death or serious injury. Different size rims are designed for different tire pressures. Inflate to correct pressure for specific rim size.

INFLATION SPECIFICATIONS

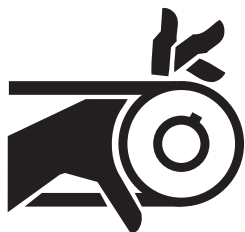


Tire Locations (L.H. shown)

1. Torque transport wheel $\frac{3}{4}$ "- 16 lug nuts to:
 24 Row 30" / 36 Row 20" / 36 Row 22" 315 ft-lb (427 N-m)
 16 Row 30" / 24 Row 20" / 24 Row 22" 450 ft-lb (610 N-m)
2. Torque wing wheel $\frac{5}{8}$ "-18 lug nuts to 200 ft-lb (271 N-m).
3. Inflate tires to the following specifications:

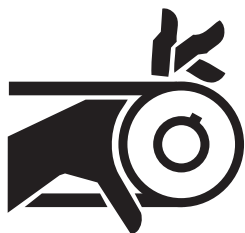
Transport Tire Size (4)	445/50R 22.5	440/55R18
Transport Tire Pressure	81 PSI	73 PSI
Wing (Field) Tire Size	380/55R 16.5 (4)	380/55R 16.5 (2)
Wing (Field) Tire Pressure	65 PSI	65 PSI

4. Lubricate implement and row units per lubrication information in this manual.

**WARNING**

Serious injury may occur from moving parts such as belts, pulleys, flywheels, or fans if they come in contact with you or your clothing.

Do not operate air compressor without protective belt guards installed. Replace damaged protective covers or guards immediately.

**WARNING**

Hydraulic air compressor with automatic controls can restart at any time and cause bodily injury.

Always unplug air compressor and drain air tanks completely before attempting any repairs or performing maintenance. Never allow children or adolescents to operate air compressor.

**WARNING**

Serious injury may occur if repairs are attempted with damaged, missing, or removed protective guards, shrouds, or missing covers.

All repair to the air compressor should be made only by authorized or trained service personnel.

**WARNING**

Serious burn injuries could occur from touching exposed metal parts such as compressor head, copper/braided discharge lines, and hydraulic motor during operation and even after compressor is shut down for sometime.

Never touch any of the exposed metal parts during operation and for an extended period of time after air compressor has shut down. Do not attempt maintenance on the unit until it has been allowed to completely cool.

Compressor oil change

Compressor needs oil changed after initial 50 hour break in, then oil should be changed every 1000 hours. 17 ounces (½ liter) of oil is required to fill compressor.

NOTE: 1 quart of hydraulic air compressor oil is P/N: G10649401.

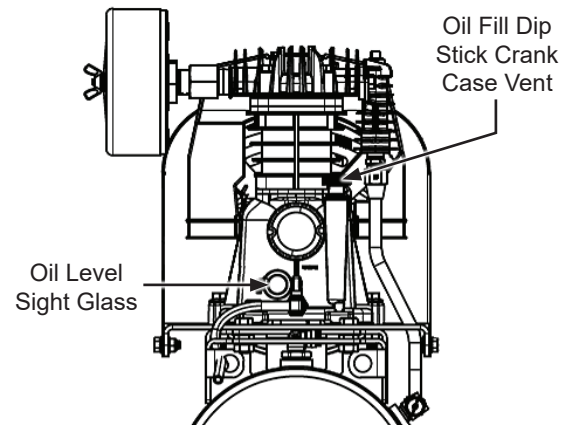
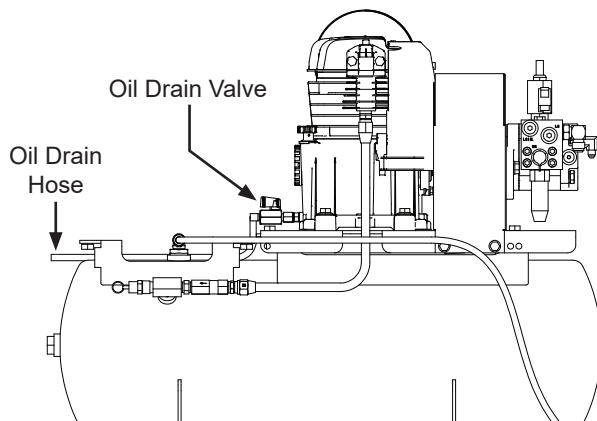
Reciprocating air compressor pumps will consume a certain amount of oil under normal operation. When filling crankcase with oil, use a single viscosity, non-detergent oil blend specifically for air compressor use (refer to chart). **DO NOT USE A DETERGENT OIL!!**

TEMPERATURE

Fahrenheit (Celsius)	0°-32°F (-17°-0°C)	32°-55°F (0°-13°C)	56°-100°F (14°-38°C)	-10°-115°F (-23°-47°C)
Non-Detergent Air Compressor Oil*	10 WT	20 WT	30 WT	Synthetic Oil

*A suitable air compressor oil has additives to reduce wear, eliminate foaming, and prevent carboning.

NOTE: All models are splash lubricated by means of dippers on connecting rods. The pump MUST be operated in a level position for proper lubrication, pump is located on planter toolbar for this purpose. The tillage system toolbar should be level so the compressor should always be level.



NOTE: Compressor must be on level ground to avoid over or under filling oil.

1. Place container (capable of holding approximately 1 quart) underneath oil drain hose.
2. Open oil drain valve on compressor to start flow of old oil. When oil stops coming out close drain valve.
3. Remove oil dipstick and slowly fill pump with oil until oil reaches fill line on sight glass.

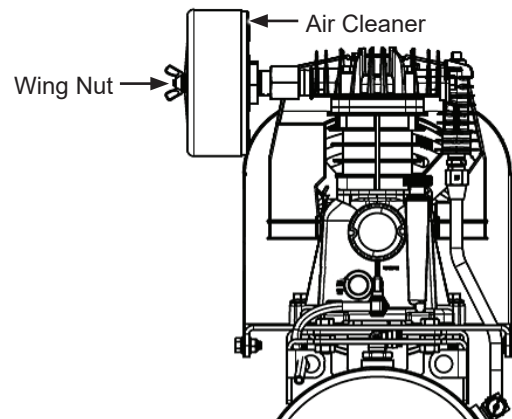
NOTE: Fill pump slowly as there is a delay between oil entering pump and seeing oil on the sight glass.

4. Confirm oil level is full on the dipstick as well.
5. Reinstall dipstick.

Replacing Air Filter

Air filter needs to be replaced annually.

1. Remove wing nut on the air filter housing.
2. Remove air filter cover and air filter.
3. Reinstall new air filter. See parts manual for filter part number.
4. Reinstall filter cover and wing nut, making sure filter is sealed between filter base plate and cover.

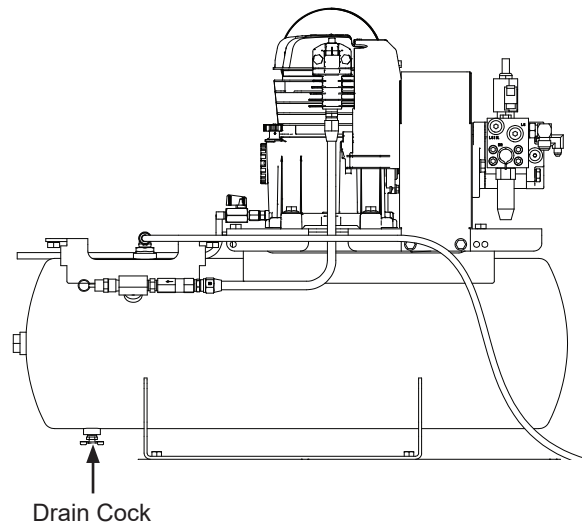


Compressor Water Drain

NOTE: It is recommended to drain water out of the compressor after each day of use.

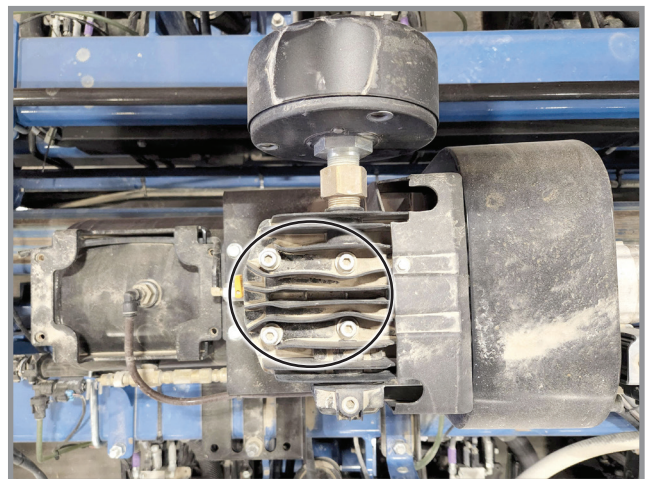
NOTE: Compressor needs to be level when draining tank.

To drain water: Open drain cock at the bottom of compressor tank, let all water drain and then close drain cock.



Re-Torque Compressor Head Bolts

Compressor head bolts should be re-torqued after a break in period of 200 hours or 4 weeks of operation. Re-torque head bolts to 19 ft-lbs.



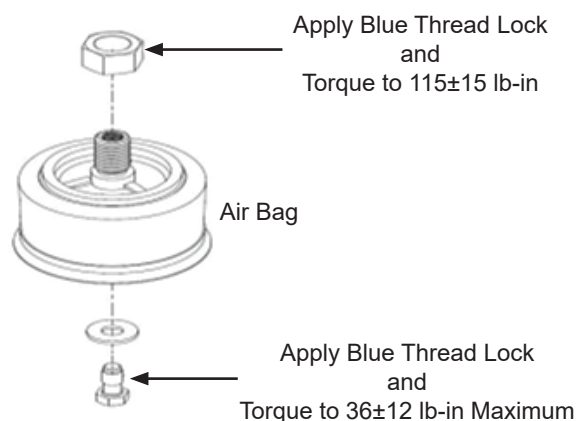
Air Bag Replacement

Replace air bags as needed.

Remove existing airbag and hardware. Discard.

Install new airbag using $\frac{5}{8}$ " hex nut and $\frac{5}{16}$ "-18 x $\frac{3}{4}$ " cap screw applying blue thread lock.

Torque hex nut to 115±15 lb-in; cap screw to 36±12 lb-in maximum.

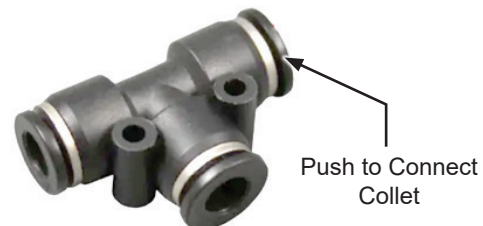


Pneumatic Tubing

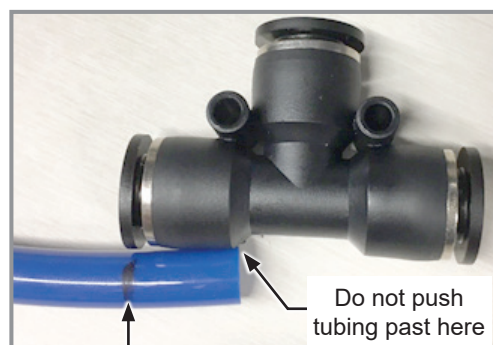
NOTICE

Do not distort or crush tubing when cutting. Cut tubing square using tube cutters (Kinze part number GA13169). An angle cut can cause air leaks affecting performance.

Air connections are made using push to connect adapters. If an airline pops out of an adapter, push it all the way back in. If an airline needs to be removed from an adapter, the push to connect collet must be pushed in before the airline can be removed.

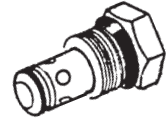


NOTE: Do not push tubing into adapters too far, doing so could block flow to the outlet. Visually check airline before pushing in, a mark on tubing can be made for reference.



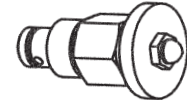
CHECK VALVE

A check valve is located in each vacuum fan motor block assembly and operates as a return line check to prevent vacuum fan motor reverse operation. Remove and inspect valve. If it does not operate properly. Check for foreign material and if O-ring is leaking internally. Replace if defective.



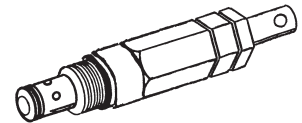
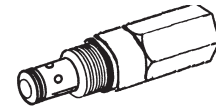
FLOW CONTROL VALVES

Two flow control valves are located in valve block on both wings of planter. Flow control valves should be adjusted for row marker raise and lower speed as part of assembly procedure or upon initial operation. If valve fails to function properly or requires frequent adjustment, it should be removed for inspection. Check for foreign material and contamination on valve and seating areas of valve body. Replace defective components.



PRESSURE RELIEF VALVES

Pressure relief valve in valve block on left wing of planter functions during lowering out of raised transport sequence. Valve is factory set and should require no additional adjustment. Pressure relief valve located in valve block on tongue functions during tongue extend cycle. This pressure relief valve ensures latch cylinder extends and releases prior to tongue extending. Valve is factory set and should require no additional adjustment. Contact your Kinze Dealer for service.

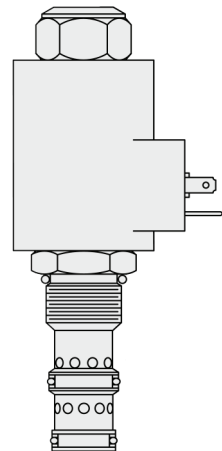


NOTICE

Connect hydraulic motor case drain to a case drain return line with zero pressure on tractor or hydraulic motor will be damaged. DO NOT connect hydraulic motor case drain to SCV outlet. Contact tractor manufacturer for specific details on "zero pressure return".

PRESSURE COMPENSATED FLOW CONTROL VALVES

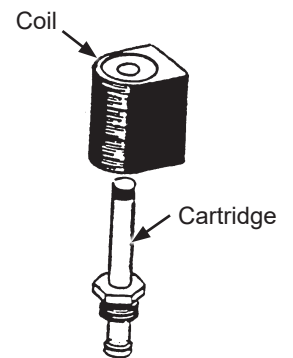
There are three pressure compensated flow control valves used on the planter. One is located on the vacuum fan block, on the ASD fan block and on the power pack block.

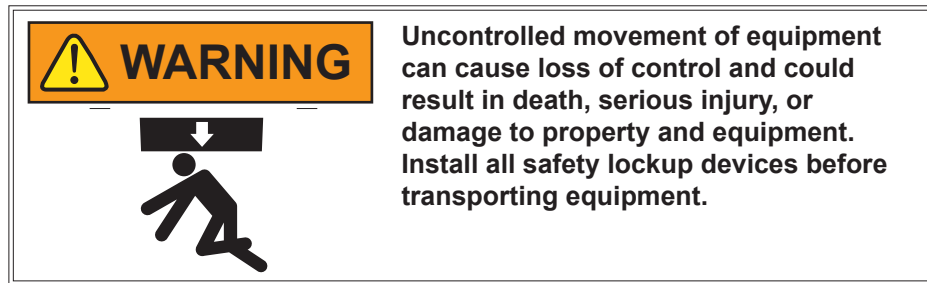


SOLENOID VALVE

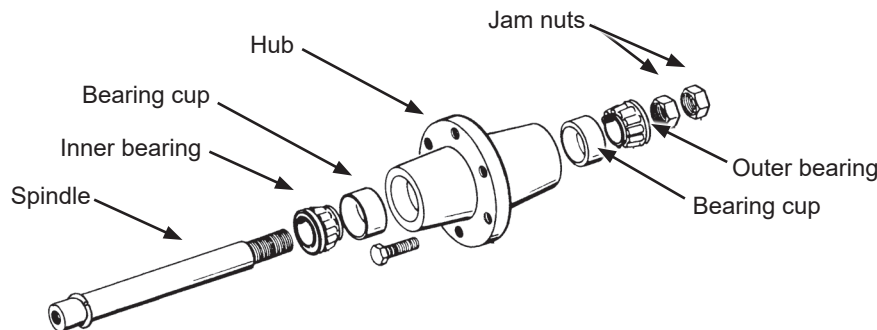
Solenoid valve consists of a chambered body with an electric coil actuated cartridge valve.

If solenoid or solenoids fail to operate, first determine if problem is electrical or hydraulic. If valve is working properly, a click will be heard when solenoid coil is energized and valve stem opens. If no sound is heard, check solenoid coil by touching top of coil housing with a metallic object such as a pliers or screwdriver. If coil is working properly, coil housing will be strongly magnetized when energized. If voltage to coil is low it will be weakly magnetized when energized and no click will be heard.





TRANSPORT AND LIFT/GROUND DRIVE WHEEL BEARING REPACK OR REPLACEMENT

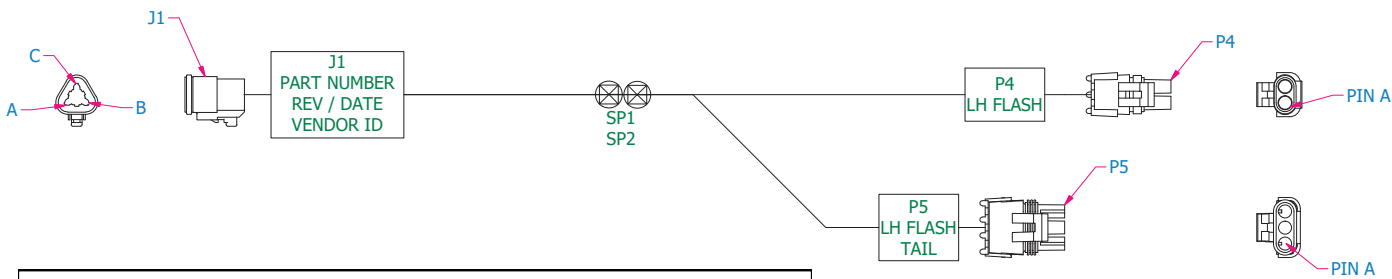


1. Raise tire clear of ground and remove wheel.
2. Remove double jam nuts and slide hub from spindle.
3. Remove bearings and cups and discard if bearings are being replaced. Clean hub and dry. Remove bearings only and not cups if repacking.
4. Press in new bearing cups with thickest edge facing in. (Bearing replacement procedure only.)
5. Pack bearings with heavy duty wheel bearing grease thoroughly forcing grease between roller cone and bearing cage. Fill space between bearing cups and hub with grease.
6. Place inner bearing in place.
7. Clean spindle and install hub.
8. Install outer bearing and jam nut. Tighten jam nut while rotating hub until there is some drag. This ensures all bearing surfaces are in contact. Back off jam nut $\frac{1}{4}$ turn or until there is only slight drag when rotating hub. Install second jam nut to lock against first.
9. Install wheel on hub. Tighten hardware evenly. Refer to the torque chart information included previously in this section.

PREPARATION FOR STORAGE

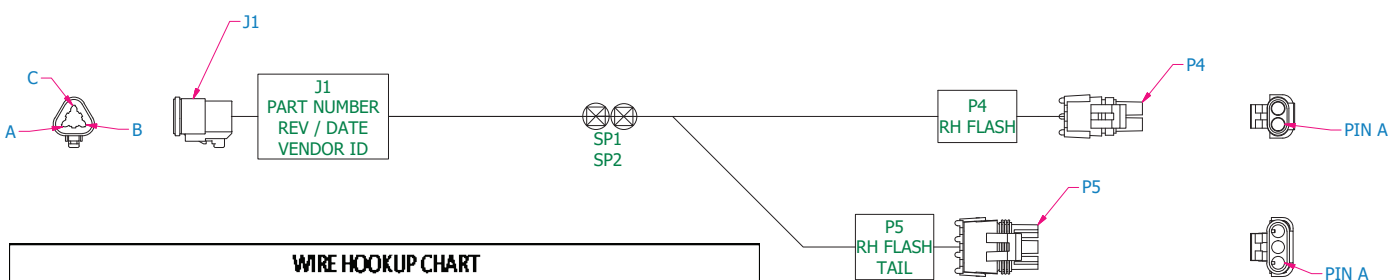
- Store tillage system in a dry sheltered area if possible.
- Remove all trash from row units and frame. Remove dirt that can draw and hold moisture.
- Lubricate tillage system and row units at all lubrication points.
- Inspect tillage system for parts that are in need of replacement and order during “off” season.
- Grease or paint disc openers/blades and row marker disc blades to prevent rust.
- Flush liquid fertilizer tanks, hoses and metering pump with clean water (if applicable).

L.H. TAIL LIGHT HARNESS (P/N: 10133001)



WIRE HOOKUP CHART							
REF DES	FROM	USED WITH ITEM	TO	USED WITH ITEM	GAUGE	COLOR	FUNCTION
W1	J1-A	7	SP1	---	18	WHT	GND
W2	J1-B	7	P5-C	3	18	BRN	TAIL
W3	J1-C	7	SP2	---	18	YEL	LH TURN
W4	SP1	---	P4-A	3	18	WHT	GND
W5	SP1	---	P5-A	3	18	WHT	GND
W6	SP2	---	P4-B	3	18	YEL	LH TURN
W7	SP2	---	P5-B	3	18	YEL	LH TURN

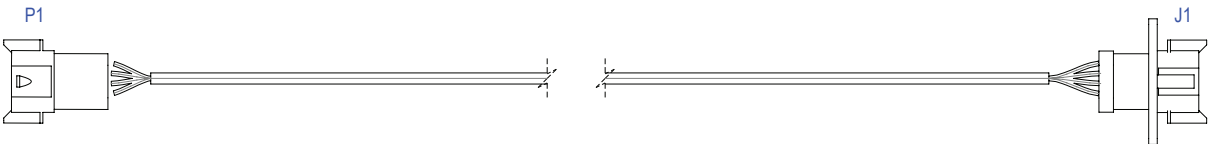
R.H. TAIL LIGHT HARNESS (P/N: 10132901)



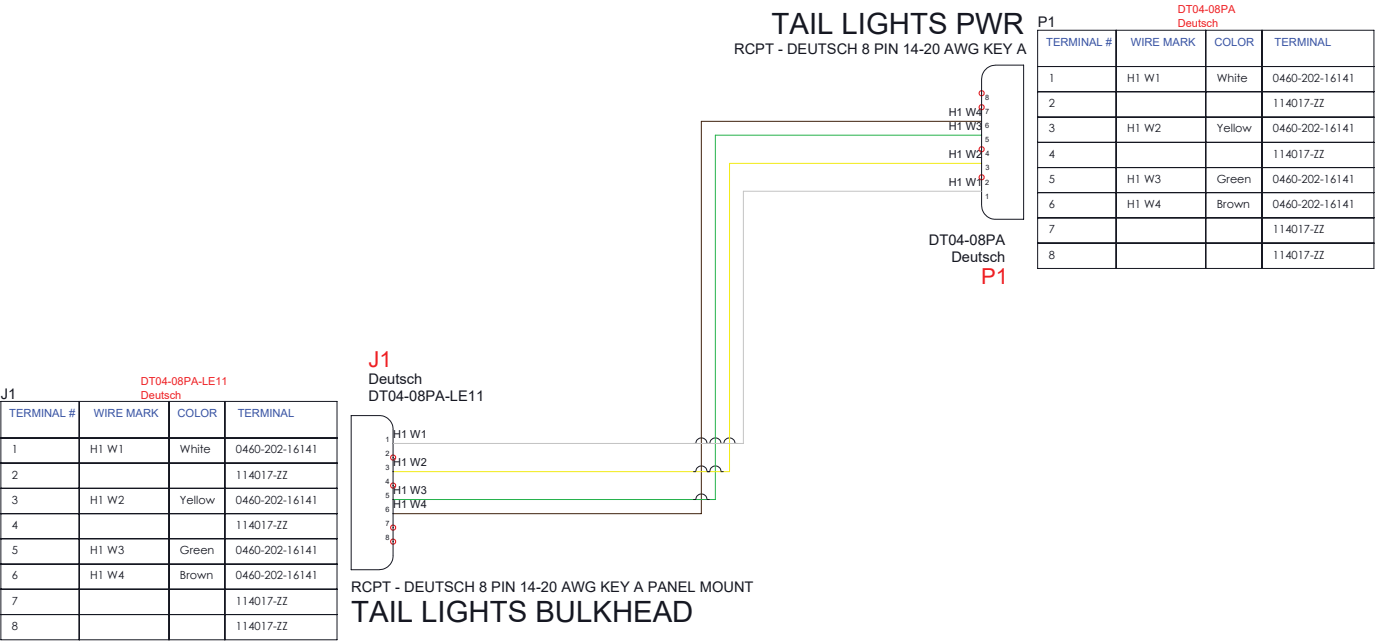
WIRE HOOKUP CHART							
REF DES	FROM	USED WITH ITEM	TO	USED WITH ITEM	GAUGE	COLOR	FUNCTION
W1	J1-A	7	SP1	---	18	WHT	GND
W2	J1-B	7	P5-C	3	18	BRN	TAIL
W3	J1-C	7	SP2	---	18	GRN	RH TURN
W4	SP1	---	P4-A	3	18	WHT	GND
W5	SP1	---	P5-A	3	18	WHT	GND
W6	SP2	---	P4-B	3	18	GRN	RH TURN
W7	SP2	---	P5-B	3	18	GRN	RH TURN

TAIL LIGHT EXTENSION HARNESS

36 Row 22", 36 Row 20" and 24 Row 30" (P/N: 11198202); 24 Row 22", 24 Row 30", and 16 Row 30" (P/N: 11198201)

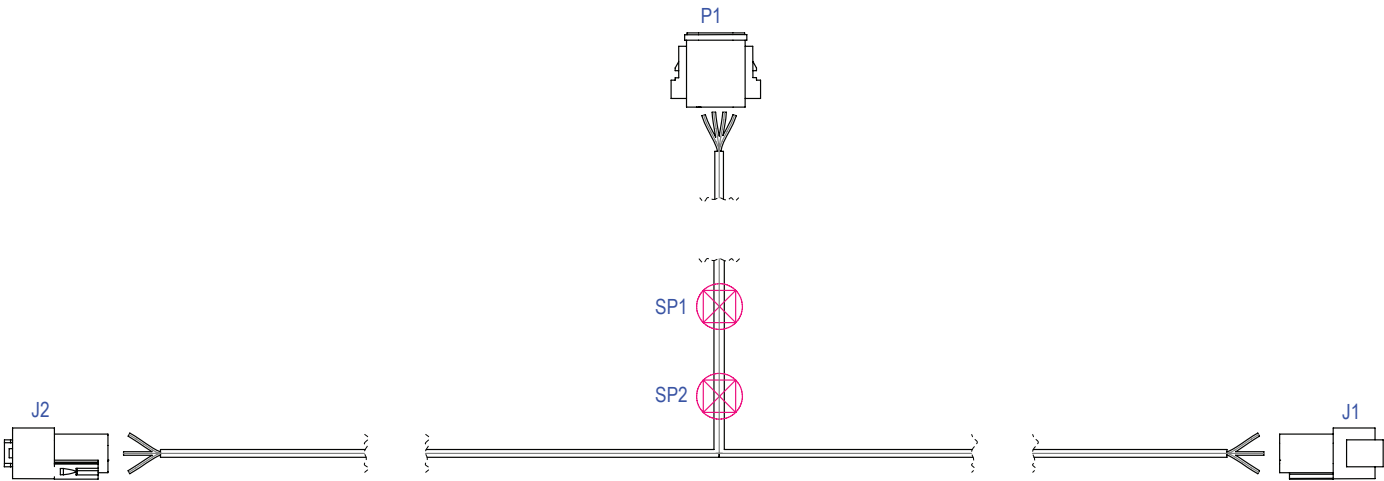


LABEL TABLE	
CONNECTOR	CONNECTOR LABEL
J1	BULK HEAD BUS BOX
P1	TAIL LIGHT



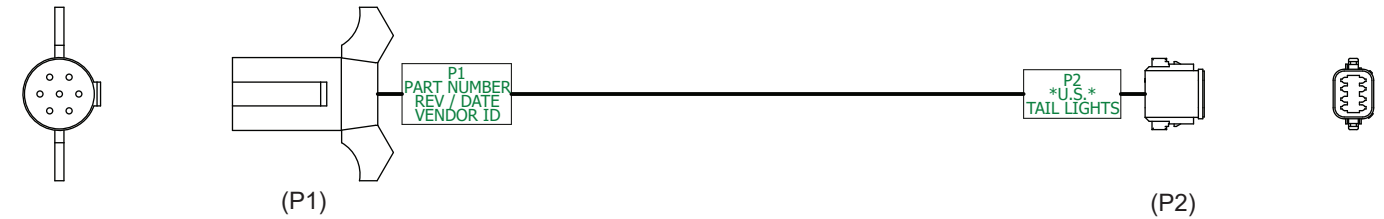
WIRE TAG	FROM	TO	COLOR CODE	WIRE GAUGE	SIGNAL
H1 W1	J1:1	P1:1	WH	16 AWG	GND
H1 W2	J1:3	P1:3	YE	16 AWG	LH TURN
H1 W3	J1:5	P1:5	GN	16 AWG	RH TURN
H1 W4	J1:6	P1:6	BN	16 AWG	TAIL LIGHT PWR

TAIL LIGHT Y HARNESS, 36 ROW 22" (P/N: 11208101)



LABEL TABLE	
CONNECTOR	CONNECTOR LABEL
P1	TAIL LIGHT PWR
J1	LEFT
J2	RIGHT

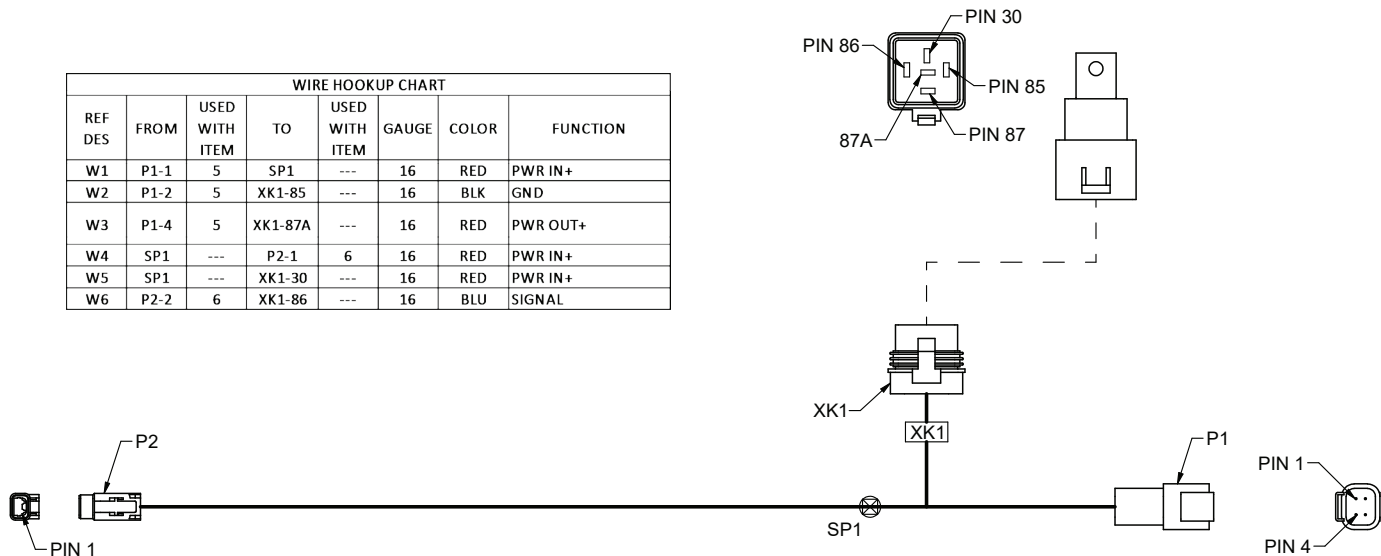
TAILLIGHT EXTENSION HARNESS (P/N: A25207)



Signal	Wire Gauge	Color	From	To
Ground	16	WHT	P1-1	P2-1
LH Turn	16	YEL	P1-3	P2-3
RH Turn	16	GRN	P1-5	P2-5
Tail	16	BRN	P1-6	P2-6

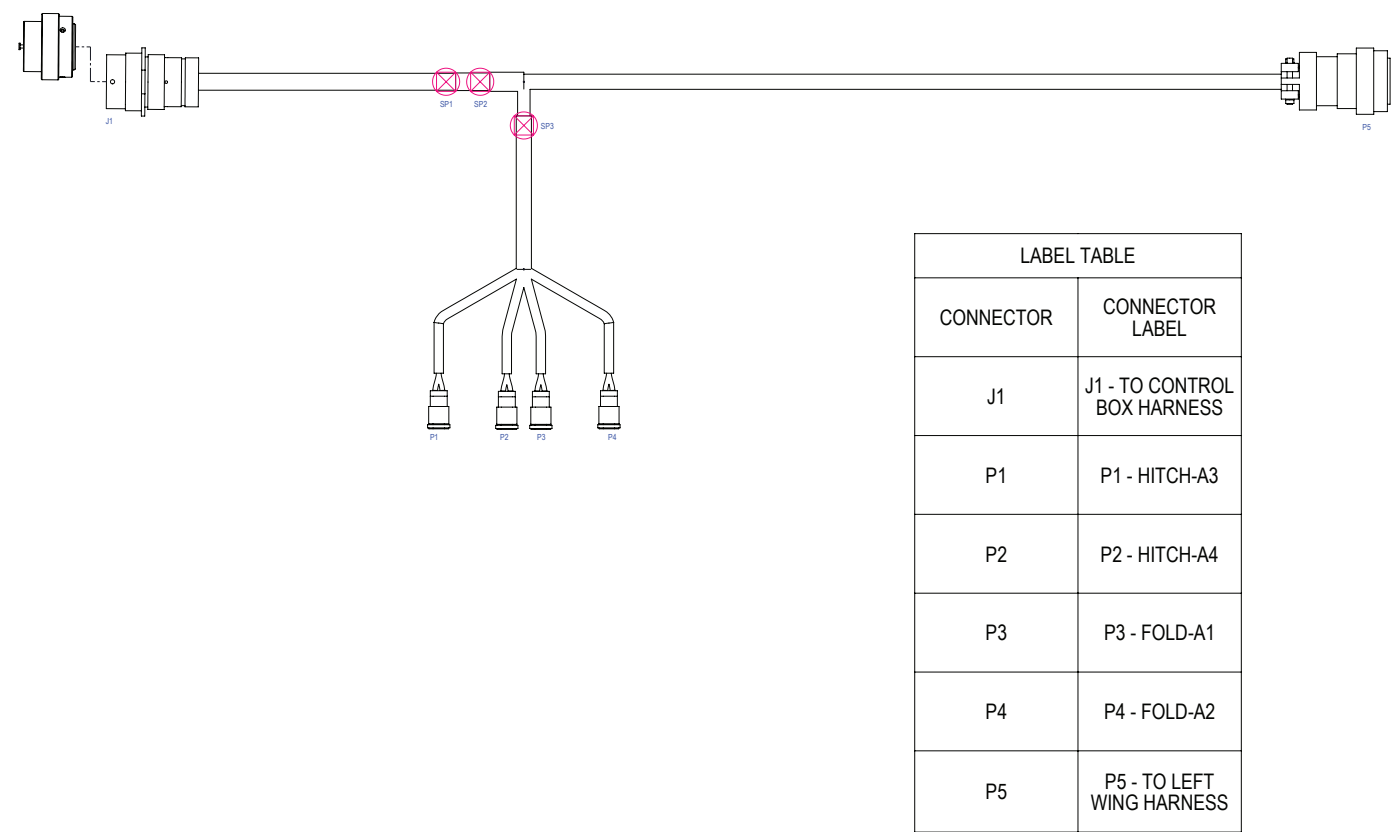
AXLE POSISTION RELAY HARNESS, 36 ROW 22" (P/N: A25166)

WIRE HOOKUP CHART							
REF DES	FROM	USED WITH ITEM	TO	USED WITH ITEM	GAUGE	COLOR	FUNCTION
W1	P1-1	5	SP1	---	16	RED	PWR IN+
W2	P1-2	5	XK1-85	---	16	BLK	GND
W3	P1-4	5	XK1-87A	---	16	RED	PWR OUT+
W4	SP1	---	P2-1	6	16	RED	PWR IN+
W5	SP1	---	XK1-30	---	16	RED	PWR IN+
W6	P2-2	6	XK1-86	---	16	BLU	SIGNAL



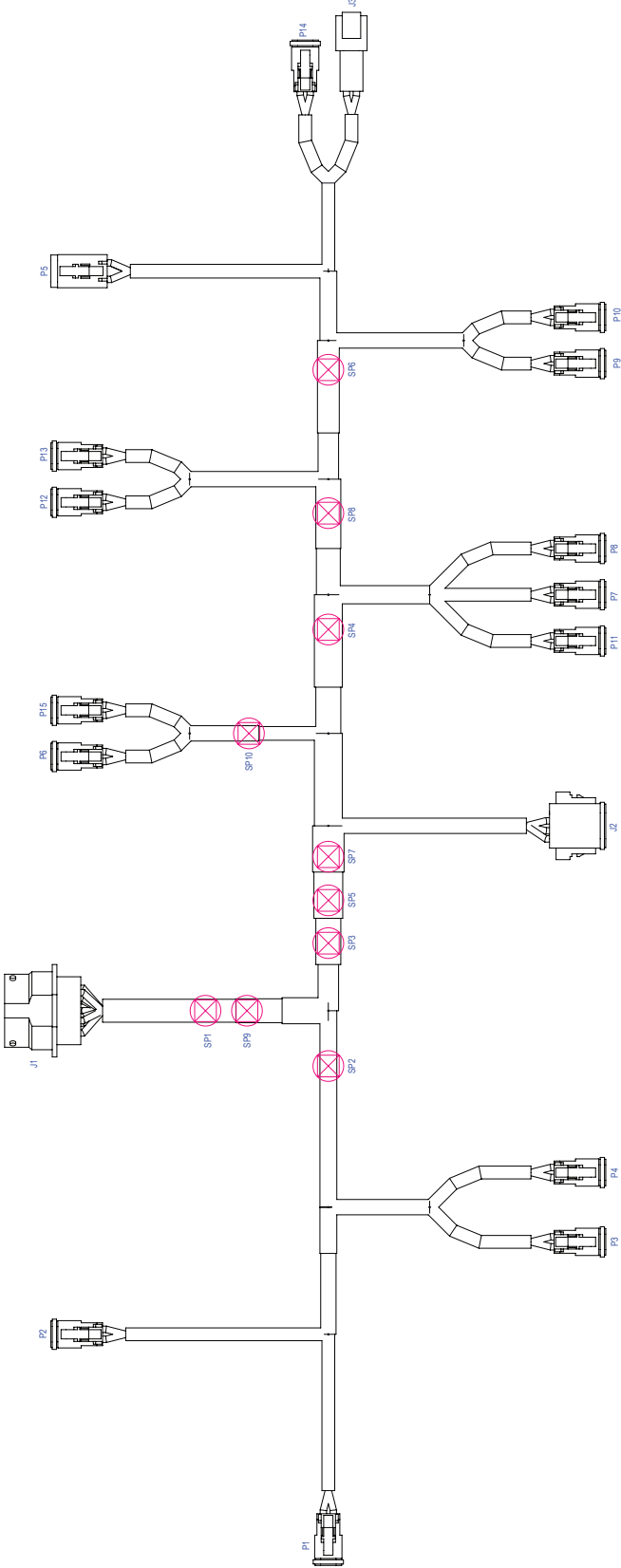
MAIN DRAFT LINK HARNESS

36 Row 22", 36 Row 20" and 24 Row 30" (P/N: 11286401); 24 Row 22", 24 Row 30", and 16 Row 30" (P/N: 11286402)



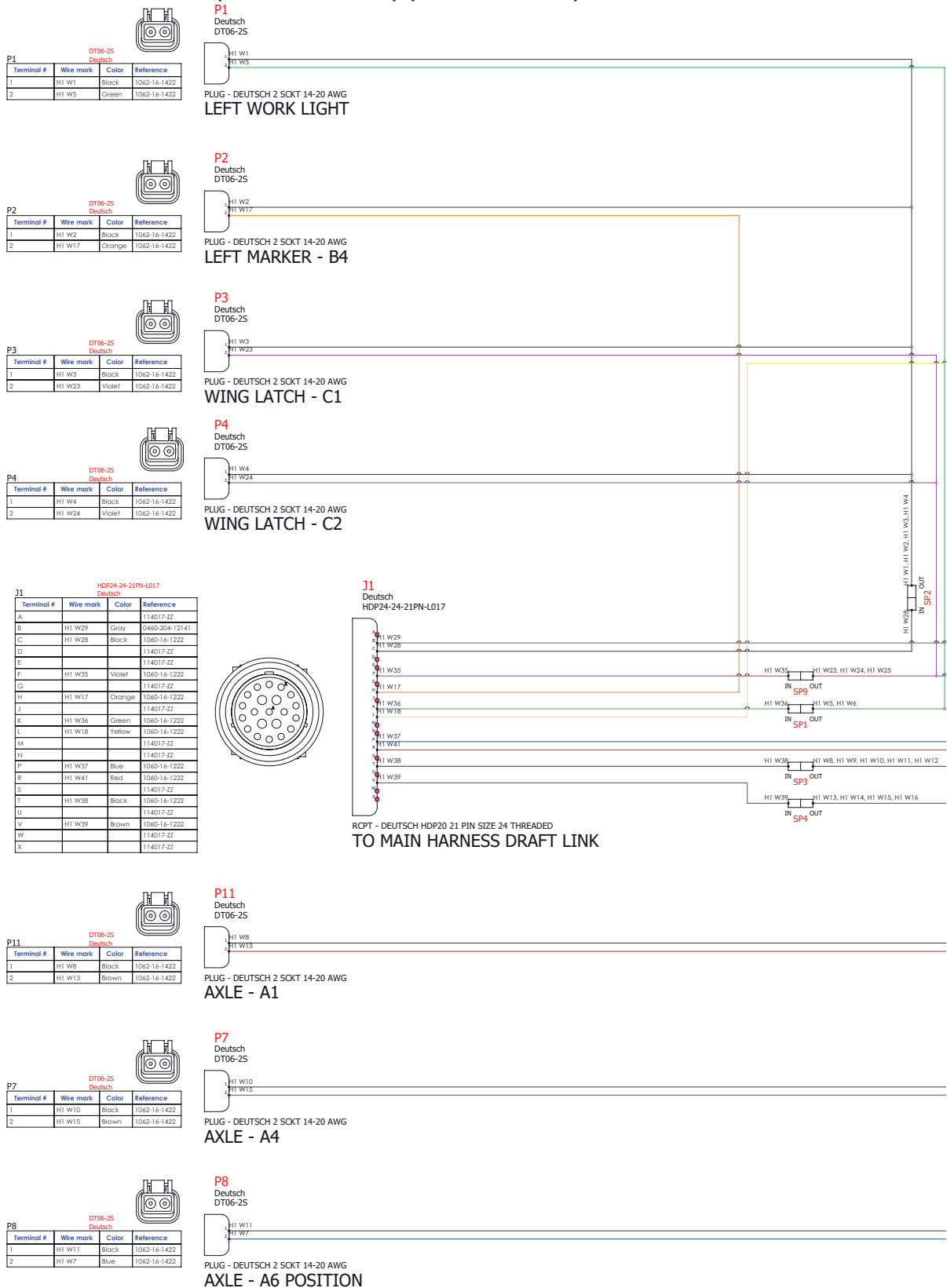
L.H. WING HARNESS

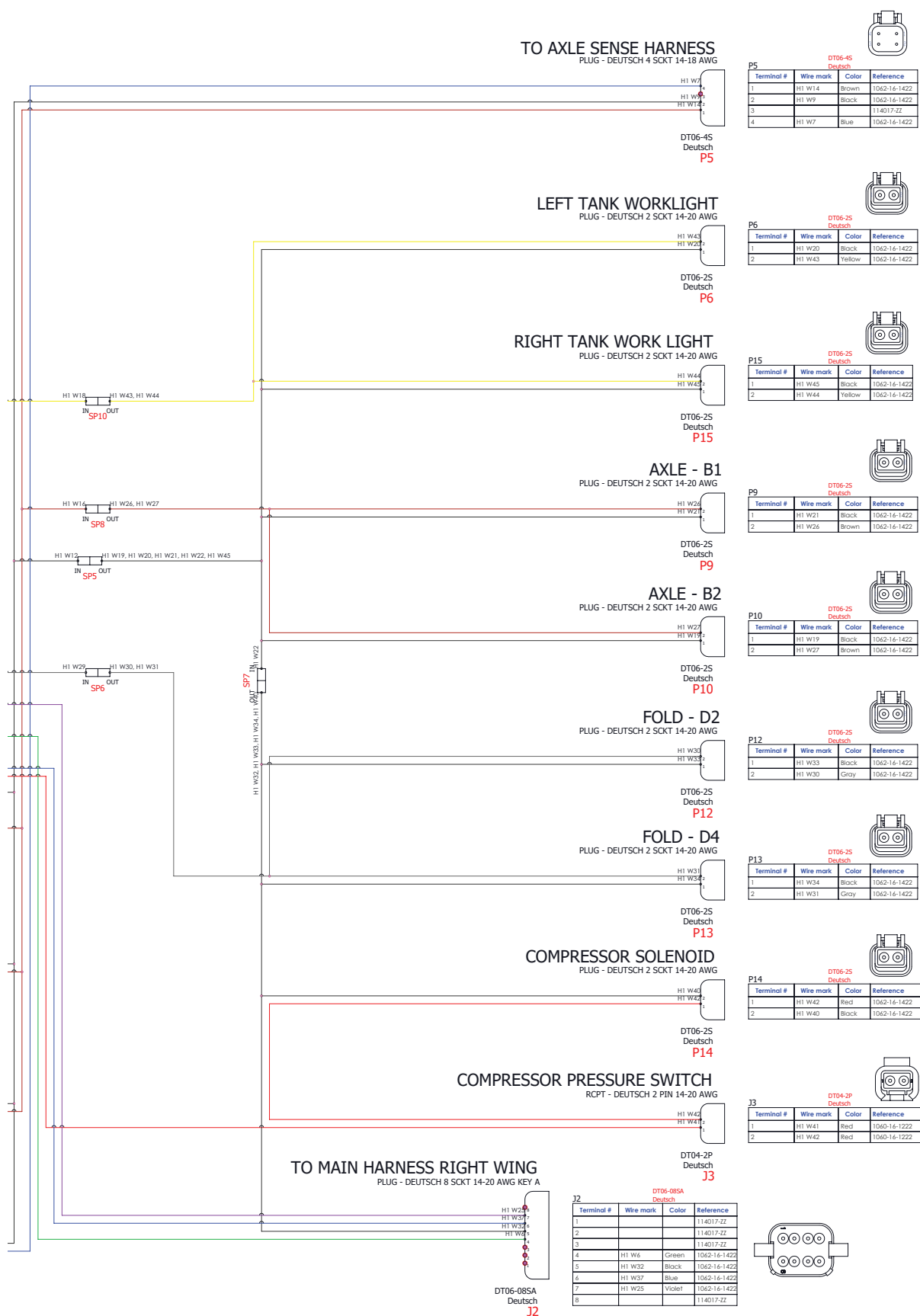
36 Row 22", 36 Row 20" and 24 Row 30" (P/N: 11286501); 24 Row 22", 24 Row 30", and 16 Row 30" (P/N: 11286502)



LABEL TABLE			
CONNECTOR	CONNECTOR LABEL	CONNECTOR	CONNECTOR LABEL
J1	J1 - TO DRAFT LINK HARNESS	P8	P8 - AXLE-A6 POSITION
J2	J2 - TO RIGHT WING HARNESS	P9	P9 - AXLE-B1
J3	J3 - COMPRESSOR PRESSURE SWITCH	P10	P10 - AXLE-B2
P1	P1 - LEFT WORKLIGHT	P11	P11 - AXLE-A1
P2	P2 - LEFT MARKER	P12	P12 - FOLD-D2
P3	P3 - WING LATCH-C1	P13	P13 - FOLD-D4
P4	P4 - WING LATCH-C2	P14	P14 - COMPRESSOR SOLENOID
P5	P5 - TO AXLE SENSE HARNESS	P15	P15 - RIGHT TANK WORKLIGHT
P6	P6 - LEFT TANK WORKLIGHT	HARNESS LABEL	PART NUMBER REV / DATE VENDOR I.D.
P7	P7 - AXLE-A4		

L.H. WING HARNESS, 36 ROW 22", 36 Row 20" and 24 Row 30" (P/N: 11286501); 24 ROW 22", 24 ROW 30", AND 16 ROW 30" (P/N: 11286502) (CONTINUED)





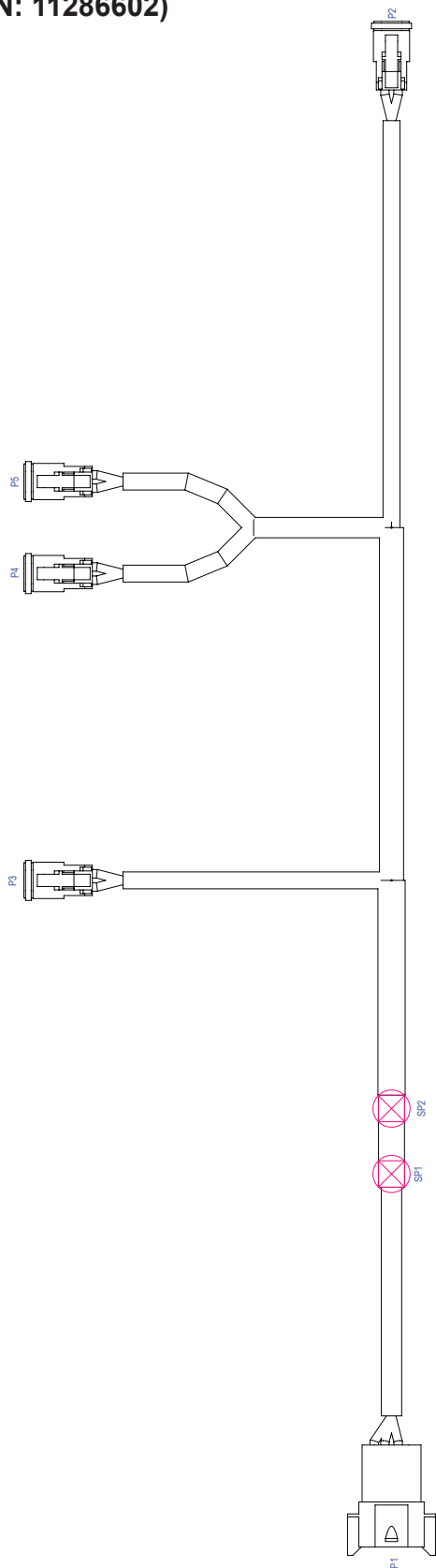
(Continued on following page.)

L.H. WING HARNESS, 36 ROW 22", 36 Row 20" and 24 Row 30" (P/N: 11286501); 24 ROW 22", 24 ROW 30", AND 16 ROW 30" (P/N: 11286502) (CONTINUED)

WIRE TAG	FROM	TO	COLOR CODE	WIRE GAUGE	SIGNAL
H1 W1	SP2:OUT	P1:1	BK	14 AWG	LEFT WORK LIGHT 12V (GND)
H1 W2	SP2:OUT	P2:1	BK	14 AWG	LEFT MARKER 12V (GND)
H1 W3	SP2:OUT	P3:1	BK	14 AWG	WING LATCH 12V (GND)
H1 W4	SP2:OUT	P4:1	BK	14 AWG	WING LATCH 12V (GND)
H1 W5	SP1:OUT	P1:2	GN	14 AWG	WORKLIGHT MARKER 12V (PWR)
H1 W6	SP1:OUT	J2:4	GN	14 AWG	WORKLIGHT MARKER 12V (PWR)
H1 W7	P5:4	P8:2	BU	14 AWG	AXLE 12V (PWR)
H1 W8	SP3:OUT	P11:1	BK	14 AWG	AXLE 12V (GND)
H1 W9	SP3:OUT	P5:2	BK	14 AWG	AXLE 12V (GND)
H1 W10	SP3:OUT	P7:1	BK	14 AWG	AXLE 12V (GND)
H1 W11	SP3:OUT	P8:1	BK	14 AWG	AXLE 12V (GND)
H1 W12	SP3:OUT	SP5:IN	BK	14 AWG	AXLE, C WL, LW FOLD, RW MARKER, COMP, RW LATCH, RW WL 12V (GND)
H1 W13	SP4:OUT	P11:2	BN	14 AWG	AXLE 12V (PWR)
H1 W14	SP4:OUT	P5:1	BN	14 AWG	AXLE 12V (PWR)
H1 W15	SP4:OUT	P7:2	BN	14 AWG	AXLE 12V (PWR)
H1 W16	SP4:OUT	SP8:IN	BN	14 AWG	AXLE 12V (PWR)
H1 W17	J1:H	P2:2	OG	14 AWG	MARKER LEFT 12V (PWR)
H1 W18	J1:L	SP10:IN	YE	14 AWG	WORKLIGHT TANK 12V (PWR)
H1 W19	SP5:OUT	P10:1	BK	14 AWG	AXLE 12V (GND)
H1 W20	SP5:OUT	P6:1	BK	14 AWG	WORKLIGHT TANK 12V (GND)
H1 W21	SP5:OUT	P9:1	BK	14 AWG	AXLE 12V (GND)
H1 W22	SP5:OUT	SP7:IN	BK	14 AWG	LW FOLD, COMP, RW MARKER, RW LATCH, RW WL 12V (GND)
H1 W23	SP9:OUT	P3:2	VT	14 AWG	WING LATCH 12V (PWR)
H1 W24	SP9:OUT	P4:2	VT	14 AWG	WING LATCH 12V (PWR)
H1 W25	SP9:OUT	J2:7	VT	14 AWG	WING LATCH 12V (PWR)
H1 W26	SP8:OUT	P9:2	BN	14 AWG	AXLE 12V (PWR)
H1 W27	SP8:OUT	P10:2	BN	14 AWG	AXLE 12V (PWR)
H1 W28	J1:C	SP2:IN	BK	14 AWG	LW WL, LW MARKER, LW LATCH 12V (GND)
H1 W29	SP6:IN	J1:B	GY	14 AWG	FOLD 12V (PWR)
H1 W30	SP6:OUT	P12:2	GY	14 AWG	FOLD 12V (PWR)
H1 W31	SP6:OUT	P13:2	GY	14 AWG	FOLD 12V (PWR)
H1 W32	SP7:OUT	J2:5	BK	14 AWG	RW MARKER, RW LATCH, RW WL 12V (GND)
H1 W33	SP7:OUT	P12:1	BK	14 AWG	LEFT FOLD 12V (GND)
H1 W34	SP7:OUT	P13:1	BK	14 AWG	LEFT FOLD 12V (GND)
H1 W35	SP9:IN	J1:F	VT	14 AWG	WING LATCH 12V (PWR)
H1 W36	SP1:IN	J1:K	GN	14 AWG	WORKLIGHT MARKER 12V (PWR)
H1 W37	J1:P	J2:6	BU	14 AWG	MARKER RIGHT 12V (PWR)
H1 W38	J1:T	SP3:IN	BK	14 AWG	AXLE, C WL, LW FOLD, COMP, RW MARKER, RW LATCH, RW WL 12V (GND)
H1 W39	J1:V	SP4:IN	BN	14 AWG	AXLE 12V (PWR)
H1 W40	SP7:OUT	P14:2	BK	14 AWG	COMPRESSOR 12V (GND)
H1 W41	J1:R	J3:1	RD	14 AWG	COMPRESSOR SWITCH 12V (PWR)
H1 W42	J3:2	P14:1	RD	14 AWG	COMPRESSOR SOLENOID (PWR)
H1 W43	SP10:OUT	P6:2	YE	14 AWG	WORKLIGHT TANK 12V (PWR)
H1 W44	SP10:OUT	P15:2	YE	14 AWG	WORKLIGHT TANK 12V (PWR)
H1 W45	SP5:OUT	P15:1	BK	14 AWG	WORKLIGHT TANK 12V (GND)

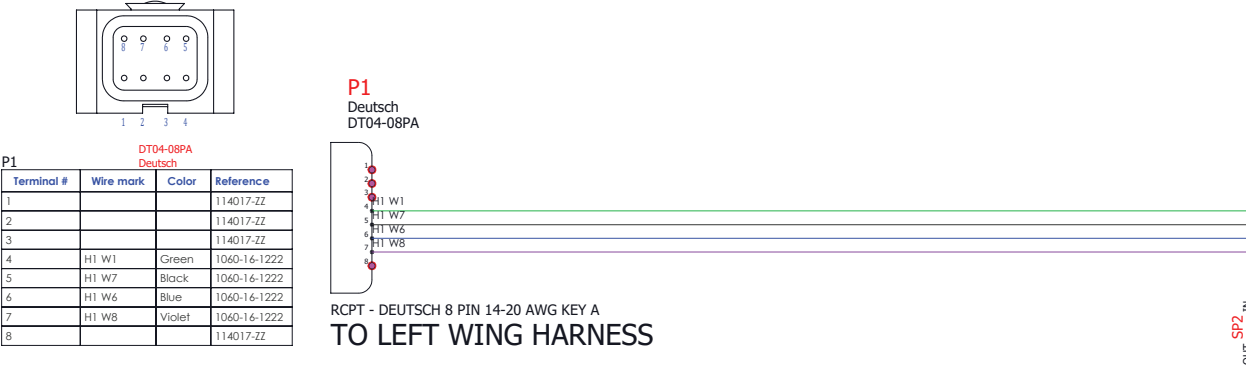
R.H. WING HARNESS

36 Row 22", 36 Row 20" and 24 Row 30" (P/N: 11286601); 24 Row 22", 24 Row 30", and 16 Row 30" (P/N: 11286602)



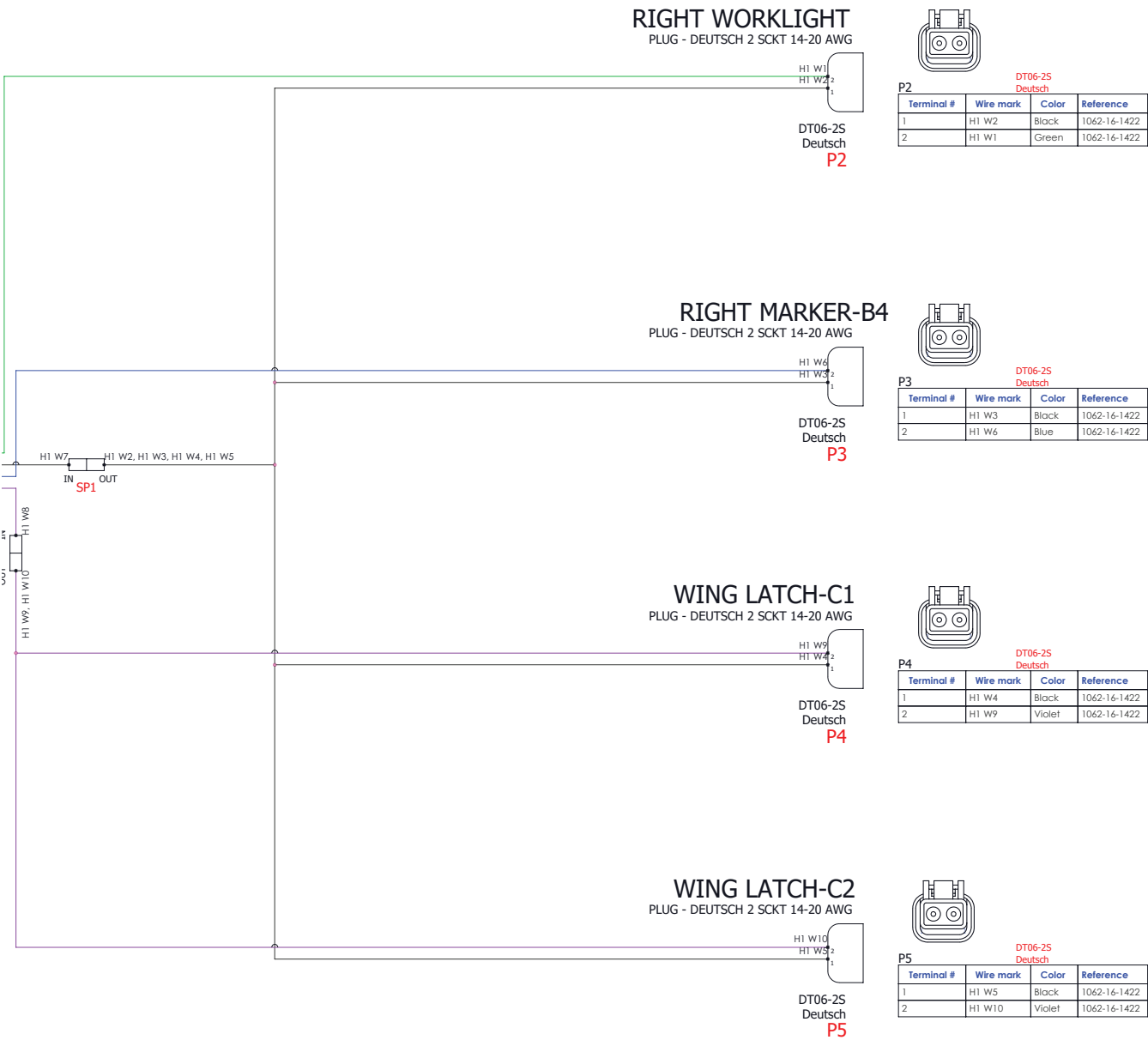
LABEL TABLE	
CONNECTOR	CONNECTOR LABEL
P1	P1 - TO LEFT WING HARNESS
P2	P2 - RIGHT WORKLIGHT
P3	P3 - RIGHT MARKER-B4
P4	P4 - WING LATCH-C1
P5	P5 - WING LATCH-C2

R.H. WING HARNESS, 36 ROW 22", 36 Row 20" and 24 Row 30" (P/N: 11286601);
24 ROW 22", 24 ROW 30", AND 16 ROW 30" (P/N: 11286602) (CONTINUED)

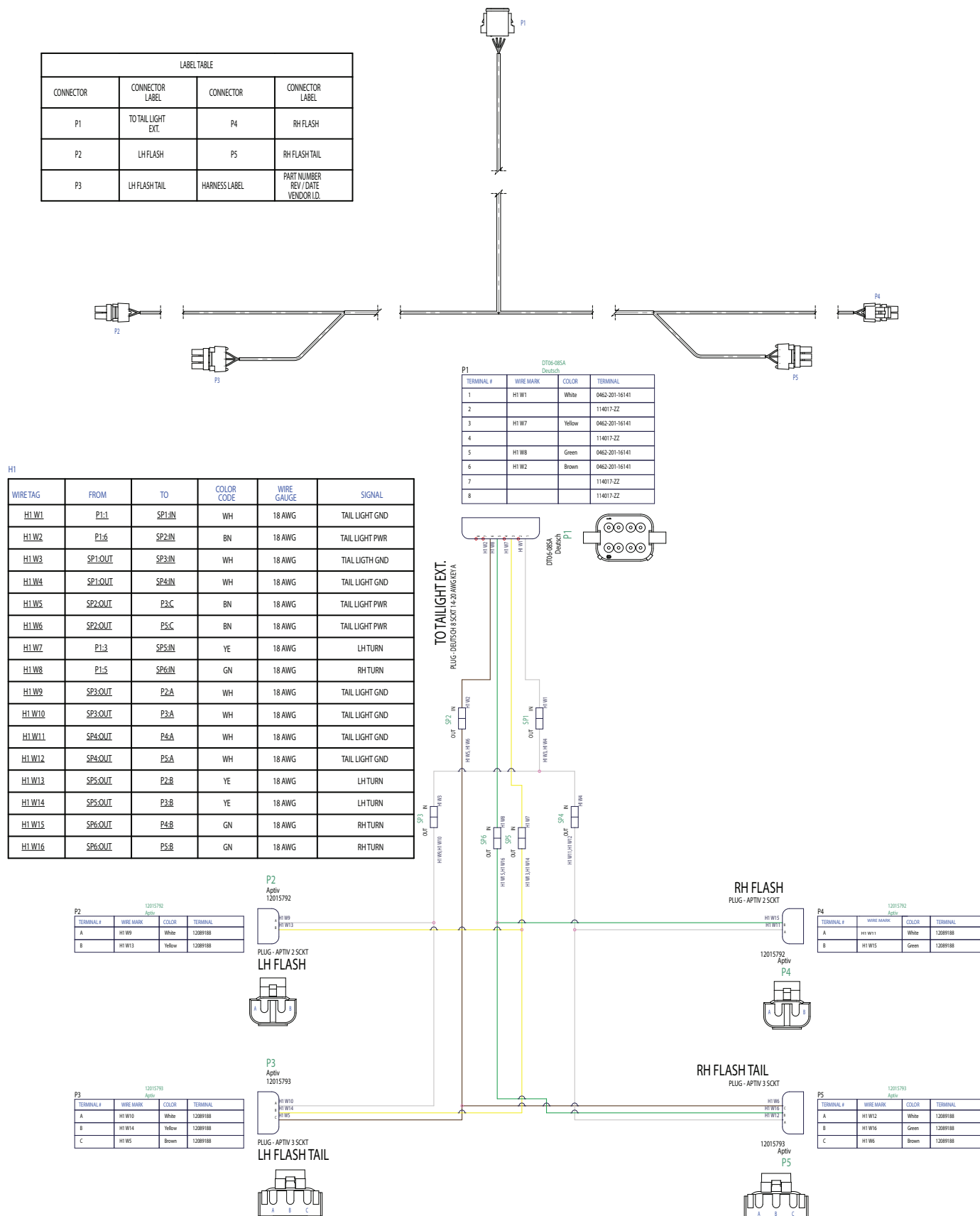


H1

WIRE TAG	FROM	TO	COLOR CODE	WIRE GAUGE	SIGNAL
H1 W1	P1:4	P2:2	GN	14 AWG	WORKLIGHT MARKER 12V (PWR)
H1 W2	SP1:OUT	P2:1	BK	14 AWG	RIGHT WORKLIGHT 12V (GND)
H1 W3	SP1:OUT	P3:1	BK	14 AWG	RIGHT MARKER 12V (GND)
H1 W4	SP1:OUT	P4:1	BK	14 AWG	RIGHT WING LATCH 12V (GND)
H1 W5	SP1:OUT	P5:1	BK	14 AWG	RIGHT WING LATCH 12V (GND)
H1 W6	P1:6	P3:2	BU	14 AWG	RIGHT MARKER 12V (PWR)
H1 W7	P1:5	SP1:IN	BK	14 AWG	RW MARKER, RW LATCH, RW WL 12V (GND)
H1 W8	P1:7	SP2:IN	VT	14 AWG	RIGHT WING LATCH 12V (PWR)
H1 W9	SP2:OUT	P4:2	VT	14 AWG	RIGHT WING LATCH-C1 12V (PWR)
H1 W10	SP2:OUT	P5:2	VT	14 AWG	RIGHT WING LATCH-C2 12V (PWR)



TAIL LIGHT HARNESS, 24 ROW 22", 24 ROW 30", AND 16 ROW 30" (P/N: 11198501)



HYDRAULIC HOSE LIFE

**WARNING**



Pressurized hydraulic fluid can penetrate body tissue and result in death, serious infection, or other injuries. Fluid injected under skin must be **IMMEDIATELY** removed by a surgeon familiar with this type of injury. Make sure connections are tight and hoses and fittings are not damaged before applying system pressure. Leaks can be invisible. Keep away from suspected leaks. Relieve pressure before searching for leaks or performing any system maintenance.

Proper storage of hydraulic hoses can significantly increase the life of the hoses, for a period of three to five years. After this period, service life of hoses may decrease, depending on variables such as variances in rubber materials and storage environment. Refer to the guidelines below for best practices when storing.

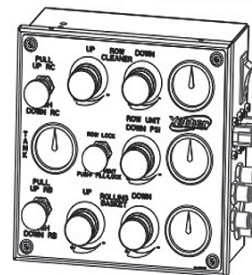
- Store in a clean, cool and dry area
- Avoid direct sunlight or moisture
- Do not store near high power electrical equipment
- Avoid contact with corrosive chemicals
- Avoid ultraviolet light
- Avoid areas with obvious signs of insects or rodents

Unusually long periods of storage or poor storage environment may lead to performance issues or premature failure. Always inspect all hoses prior to use for extensive wear, cuts, or holes. If such flaws are identified, replace immediately to avoid potential failure, property damage or bodily injury.

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AIR CLOSING WHEELS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Closing wheel(s) leave severe imprint in soil.	Too much closing wheel down pressure.	Adjust closing wheel pressure.
Closing wheel(s) not firming soil around seed.	Not enough closing wheel down pressure.	Adjust closing wheel pressure. Severe no till conditions may require use of cast iron closing wheels.
Folded air bag.	Initial inflation with planter on ground.	Inflate system to a lower pressure and manually straighten out airbags.
System unable to maintain pressure.	Loose fitting(s) or bad compressor.	Verify compressor is running.
		Verify tank pressure.
		Check for air leaks.
		Verify pressure in circuit gauges at control valves.
System is building pressure but individual circuits are not pressurizing (tank pressure is good, circuit pressure gauge is zero).	Loose fitting(s) or control box valve.	Check circuit for air leaks.
		Verify air control valve in control box are functioning.



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