

Xpress
Double Disc Air Drill

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Any updated pages after this date will have the revision date printed on the bottom of the pages.

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Safety Section

For your safety and to develop a better understanding of your equipment, thoroughly read the Operator's Section of this manual before operation.

Safety-Alert Symbols

The SAFETY-ALERT SYMBOL indicates that there is a potential hazard to personal safety involved and extra safety precautions must be taken. When you see this symbol, be alert and carefully read the notation that follows it. Hazard control and accident prevention are dependent upon the carefulness, awareness and proper training of the personnel involved in the operation, transport, maintenance and storage of this equipment.

The following Safety-Alert Symbols are placed throughout this manual for your personal safety. Be sure you and your fellow workers follow them closely.

DANGER

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

WARNING

This notation indicates a potentially hazardous situation which, 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

This notation indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert you of unsafe practices.

Safety Rules

Most accidents are the result of negligence and carelessness, caused by the failure of the operator to follow all the safety precautions. Your machine has been designed with many built-in safety features, but the following precautions are mandatory to prevent such accidents.

Make sure that all personnel who use the machine, read and fully understand how to operate the machine safely.

This Operator's Manual is considered a part of the implement and should remain with it even when loaned or sold.

Note: These rules and instructions are for the safety of all personnel operating this machine and must be reviewed at least annually.

Prior To Operation

CAUTION

Before operating the machine, read and fully understand the Operator's Manual. If you do not understand any portion of this Operator's Manual, contact your MORRIS dealer for clarification.

1. Do not wear loose-fitting clothing or clothing with loose strings or straps which could get entangled in the machines moving parts. Always wear long pants and protective shoes.
2. Securely support any machine elements that must be raised for assembly, repair or adjustments. Use caution when working under or near these areas.
3. After assembling, repairing or adjusting, make sure all tools, parts, and rags are removed from the machine before attempting to operate it.
4. Check that wheel lug nuts or bolts are tightened to the specified torque. Make sure the implement tires are inflated evenly. Refer to the appendix for the torque and inflation charts.
5. Do not use the machine until you are sure the area is clear, especially of children and animals.
6. Make a visual inspection of the machine for any loose bolts, worn or missing parts, and make necessary repairs. Follow the lubrication instructions in the operating section of this manual.
7. Do not stand on or straddle the tongue when hitching or unhitching the machine from the tractor. Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up the machine.
8. Securely attach the machine to the towing vehicle. Use a high strength, appropriately sized hitch pin and secure with a suitable retaining device.
9. Always use a safety chain with a tensile strength equal to or greater than the gross weight of the machine and any attachments when transporting. Provide only enough slack in the chain to permit turning.

CAUTION

Misuse or modification of this machine can cause serious personal injury or damage to the machine.

During Operation

1. The machine should be operated only by a qualified person who is familiar with the tractor, the machine, and all the safety related requirements. Do not let children operate this machine.
2. Beware of bystanders, particularly children! Always look around to make sure it is safe to move the machine.
3. Never permit riders on the machine or on the tractor during operation.
4. Keep everyone clear of the machine when folding or unfolding the wings.
5. Always have the machine attached to the tractor or another implement when folding or unfolding the wings.
6. When unfolding the wings, make sure there is adequate room to unfold the machine.
7. Always shut off the tractor and shift into park when leaving the tractor. Remove the key when leaving the tractor unattended.
8. Do not adjust, lubricate or repair the machine while it is in operation.
9. Use caution when working around hills. Be sure that the slope is not so steep as to cause the machine or tractor to turn over. On steep slopes, go up and down the slope and use caution when turning the machine.
10. Use caution when operating near a ditch, hill, creek or fences.
11. Following every 100 hours of operation, or as needed, tighten all the nuts and bolts to the specified torque listed in the appendix section of this manual.

WARNING

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting a hydraulic line or any other line. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Wear proper hand and eye protection when searching for leaks. Use a piece of cardboard or heavy paper instead of your hand to locate the leak. If ANY Fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene may result.

While Transporting

1. Always use flashing lights when traveling on a road or highway, except where such use is prohibited by law.
2. Comply with all state and local laws while transporting.
3. Always use a slow moving vehicle emblem when transporting. Keep the SMV emblem and all reflectors clean and visible to warn other motorists of your presence.
4. Latch tractor brakes together and stop slowly. Never use independent braking with the machine in tow as loss of control and/or upset of the machine can result.
5. Always check the lug nuts for tightness, before transporting.
6. Shift the tractor into a lower gear when transporting down steep slopes or hills. Always keep the tractor in gear when transporting down a slope. Do not coast.
7. Do not pull the machine on any public roadways with any vehicle, except a tractor of the size required for field operation.
8. Always use a safety chain with a tensile strength rating equal to or greater than the gross weight of the machine. Provide only enough slack in the chain to permit turning. Do not use the safety chain for towing.
9. ASAE Standards state that while transporting any equipment that does not have brakes, the maximum speed should NOT exceed 32 km/h (20 m.p.h.).
10. Always check for overhead obstacles during transport. Know the overall height, width, length, and gross weight of the machine and the towing vehicle before transporting.

Maintenance Safety

1. Understand the service procedures before doing any work on the machine. Keep the area clean and dry.
2. Securely support any machine components that must be raised for service or adjustments. Use caution when working under or near these areas.
3. Never lubricate or service the machine while it is moving.
4. Disengage all power and operate controls to relieve pressure.
5. Lower the machine to the ground, stop the engine, and remove the key, before performing any service or adjustments.
6. Keep all parts in good condition and properly installed. Replace worn or broken parts immediately. Remove any buildup of grease, oil, or debris.
7. Check all bolts and nuts frequently to be sure they are tightened to the specifications.

8. Make sure all hydraulic line connectors are tight, and all hydraulic hoses and lines are in good condition before applying pressure to the system.
9. Perform the maintenance instructions described in this manual according to the schedule provided. If major repairs are ever needed or assistance is desired, contact an Authorized MORRIS Dealer. To ensure optimum performance and safety, always purchase genuine MORRIS replacement parts and accessories. Using unapproved replacement parts and accessories could void the warranty provided by MORRIS.
10. Do not modify or permit any modification to this machine or any of its components, without first consulting your authorized MORRIS Dealer.
2. Keep all safety signs clean and legible.
3. Replace all damaged or missing safety signs. Order new safety signs from your nearest MORRIS dealer.
4. When ordering new or replacement components make sure the correct safety sign is affixed to the new part, if not be sure to order a replacement safety sign to install.
5. Refer to this section or safety sign placement in the parts section of this manual for the proper sign placement location. To install new safety signs:
6. Clean the area the sign is to be placed on.
7. Spray soapy water on the surface where the sign is to be placed.
8. Peel the backing from the sign, and carefully place on the wet surface, when placement is in the correct position, press firmly onto the surface.
9. Squeeze out the air bubbles with the edge of a credit card.

Tire Service Safety

1. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job safely.
2. Always maintain the correct tire pressure. Do not inflate tires above the recommended pressure.
3. When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand off to one side and NOT in front or over the tire and wheel assembly. Use a safety cage if available.
4. Explosive separation of a tire and rim can cause serious injury or death.
5. Check tires for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts, before and after each use.

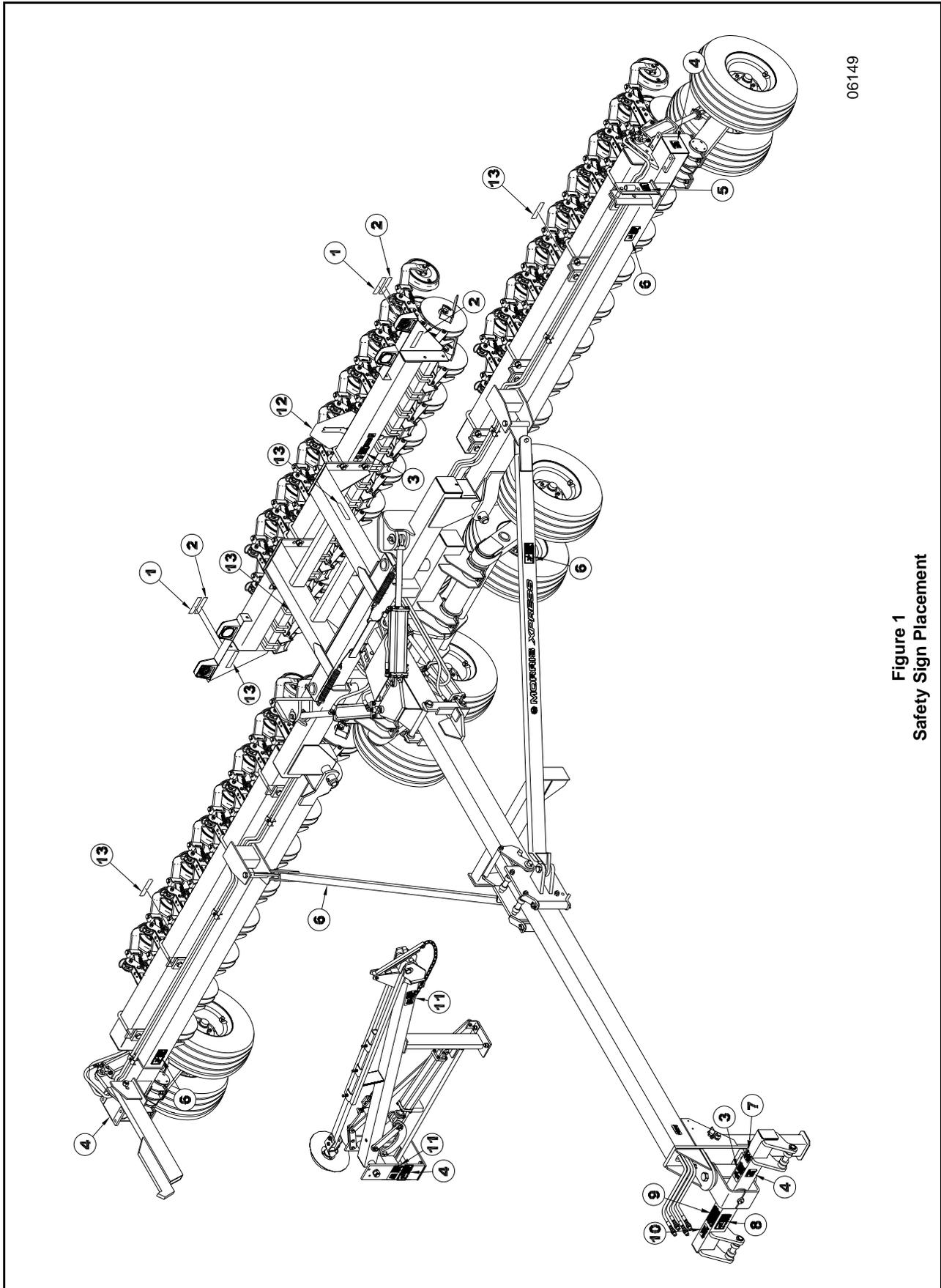
The types of safety signs and locations on the machine are shown in the following illustrations. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and area or particular function that requires your SAFETY AWARENESS.

Be Prepared For Accidents

1. Review and be aware of what to do in the event of an accident or fire.
2. Keep a first aid kit and a fire extinguisher handy.
3. Keep an up to date list of emergency phone numbers for doctors, ambulance, hospital, police, and fire departments near your phone.
4. Wear close fitting clothing and safety equipment that is appropriate for the job.
5. Use a seat belt when you operate a tractor with a roll-over protective structure (ROPS) to minimize the chance of injury from an accident such as an overturn.
6. DO NOT use a seat belt if you are operating a tractor without a ROPS.

Safety Signs

1. Your machine comes equipped with all the safety signs in place. They were designed to help you safely operate your machine. Read and follow their directions completely.



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Figure 1
Safety Sign Placement



Red Reflective Tape

1 997661



Orange Reflective Tape

2 997662



3 997043

01437



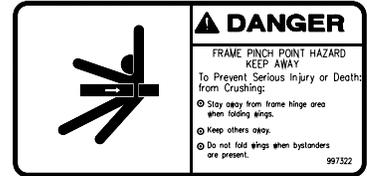
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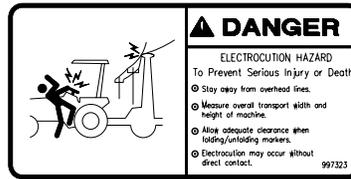
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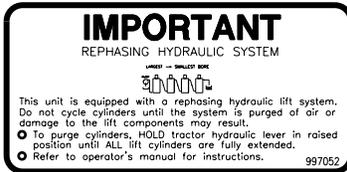
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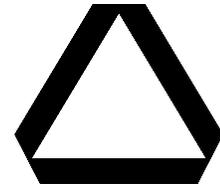
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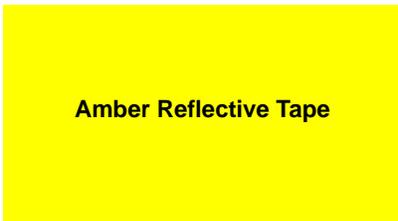
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12 7001

01464



Amber Reflective Tape

13 997663

Introduction

Congratulations on the purchase of your new MORRIS product. We welcome you to the growing number of satisfied MORRIS customers. Your new product has been engineered and manufactured with quality and service as our top priority. It should give you years of service with routine maintenance.

We especially want to call your attention to **Safety**. Although your machine was designed with the safety of the operator in mind, accidents can still happen, so **PRACTICE ALL SAFETY PRECAUTIONS**.

Using This Manual

This Operator's Manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance of your new MORRIS product. Read this manual and follow the recommendations to help ensure safe and efficient operation. After reading this manual, keep it in a convenient place for quick and easy reference should any question arise.

The information contained within this manual was current at the time of publication. Some parts may change slightly to assure you the best performance.

To order a new Operator's Manual contact your authorized MORRIS Dealer or write to the address listed at the end of this page. Always include the model and serial numbers of your machine.

Terminology:

Right or Left as listed in this manual is determined by standing to the rear of the machine and facing the direction of travel.

Definitions:

Note: A special point of information to its preceding topic. The authors intention is that you read carefully and note the information before continuing.

IMPORTANT: Information related to its preceding topic, that the author believes would be of use.

Owner Assistance

If customer service or repair parts are required for your machine, please contact your local MORRIS Dealer. They have trained personnel, repair parts, and the equipment needed to repair your product.

These parts have been specially designed for your machine and should only be replaced with genuine MORRIS REPLACEMENT PARTS. Remember routine maintenance to your product can save on costly repairs and valuable downtime.

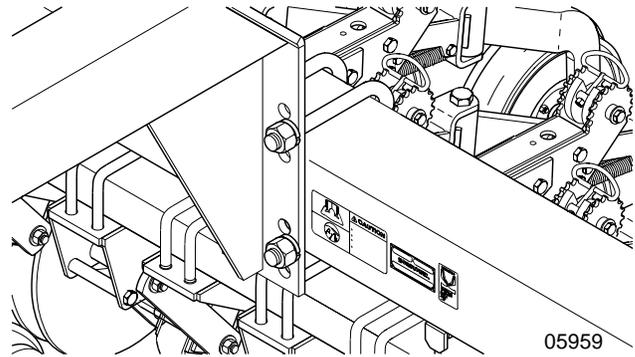


Figure 2
Serial Number Plate Location

Serial Number Plate

Refer to Figure 2 for the location of your serial number.

For prompt service, always use the serial number and model number when ordering parts from your MORRIS Dealer. Be sure to include these numbers in all correspondence.

MORRIS and your local MORRIS Dealer want you to be satisfied with your new machine. If for any reason you are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your local dealership Service Manager to make sure they are aware of any problems you may have and give them the opportunity to correct them.
2. If you are still not satisfied, seek the Owner or General Manager of the dealership, explain the problem and request assistance.
3. For further assistance, your local dealership will be able to contact the local MORRIS District Manager.

Again **Thank You** for choosing MORRIS.

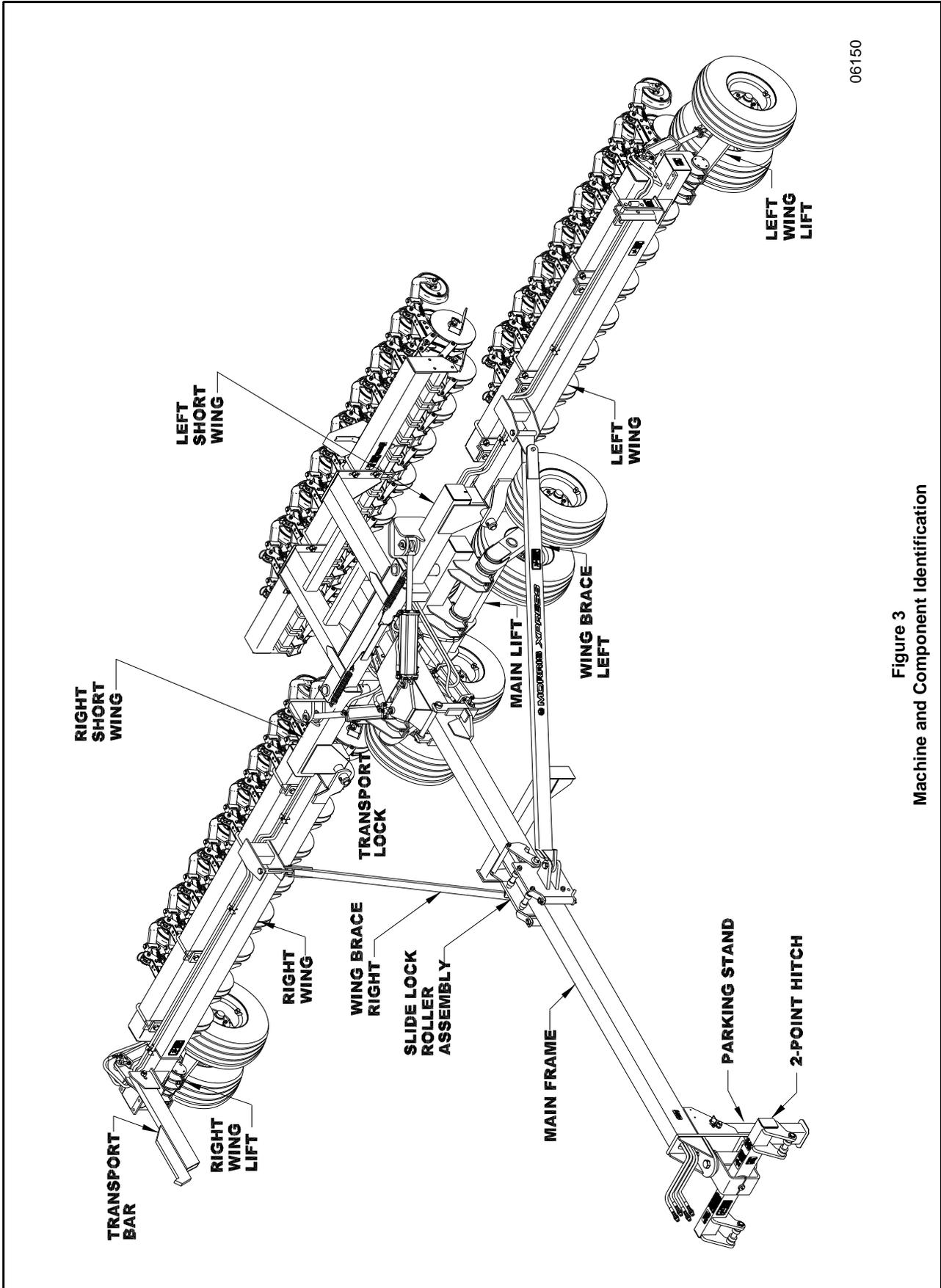


Figure 3
Machine and Component Identification

Assembly Section

Before Beginning Assembly

This assembly section is a step by step procedure to aid in proper assembly of your new MORRIS Xpress Air Drill.

Before beginning actual assembly, this entire section should be read carefully and fully understood.

Carefully unpack all the parts and hardware included and verify nothing was damaged or lost in shipping.

All bolts and nuts need to be used in the proper locations in which they were designed, to prevent damage to the Xpress Air Drill. When two or more bolts are used to attach a part, always insert the bolts and loosely tighten the nuts. Once the correct placement has been achieved, tighten the nuts evenly to prevent misalignment or distortion of the parts.

For the proper torque values, refer to the appendix.

Your new MORRIS Xpress Air Drill was shipped to you almost completely assembled for your convenience. The only items that were not fully assembled are the wing press wheels, which could not be installed at the factory due to over width limitations.

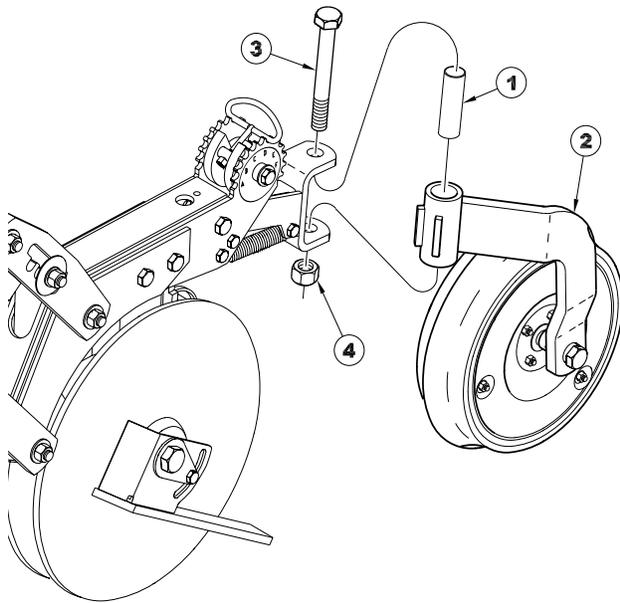


Figure 4
Press Wheel Assembly

Press Wheel Assembly

Insert the clamp bushing (#1), as shown in Figure 4,

through the rear press wheel frame assembly (#2), if not already in place, then align the rear press wheel frame assembly in the press wheel frame swivel. Insert the 3/4" x 5 1/2" hex bolt (#3) through the swivel and press wheel frame assembly and attach and tighten the 3/4" lock nut (#4).

Optional Opener Shield Assembly

1. Insert a 3/8" x 4 1/4" carriage bolt (#1) as shown in Figure 5, through the back of the opener mount. Place a mounting clip (#3), and a lock nut (#4) on the carriage bolt, but do not tighten the lock nut all the way.

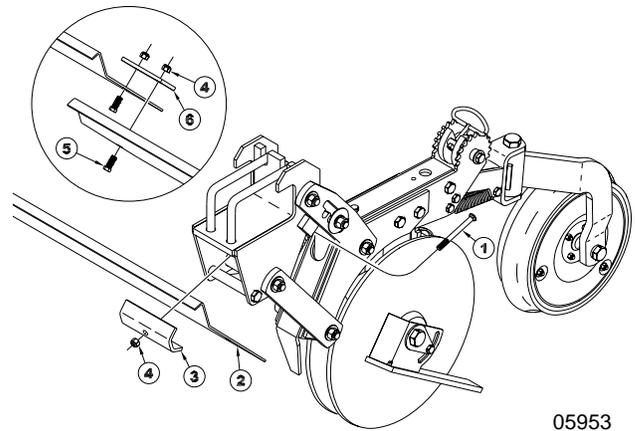


Figure 5
Opener Shield Assembly

2. Slide an opener shield (#2) between the mounting clip and the opener mount. Tighten the lock nut (#4) when the shield is in position.
3. When attaching two shields together, place a tie strap (#6) over the holes on the ends of each opener shield and insert 3/8" x 1" hex bolts (#5) and lock nuts (#4).

Mounting the Hydraulic Row Marker

1. Mount the row marker (#1) as shown in Figure 6, to the Xpress Air Drill frame using a 3/4" x 8 3/4" x 7 13/16" u-bolt (#7), a flat washer (#4), lock washer (#3) and a hex nut (#2) on left end of the marker frame.

Assembly Section

- Use 3/4" x 2 1/2" hex bolts (#8), lock washers (#3) and hex nuts (#2) on the right end of the marker frame.

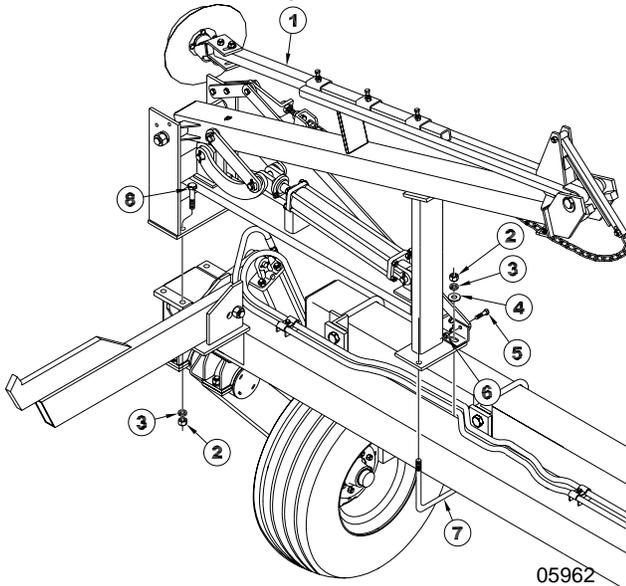


Figure 6
Mounting the Row Marker

Note: Hex bolt (#5) and nut (#6) are left loose until the u-bolt (#7) is in place and tight, then the hex bolt (#5) and nut (#6) can be tightened. Make sure the u-bolt (#7) has been inserted through the slotted hole in the marker linkage mount.

Wing Frame Row Marker Hydraulics

- Insert 90 degree straight thread elbows (#1), as shown in Figure 7, into the row marker cylinder.

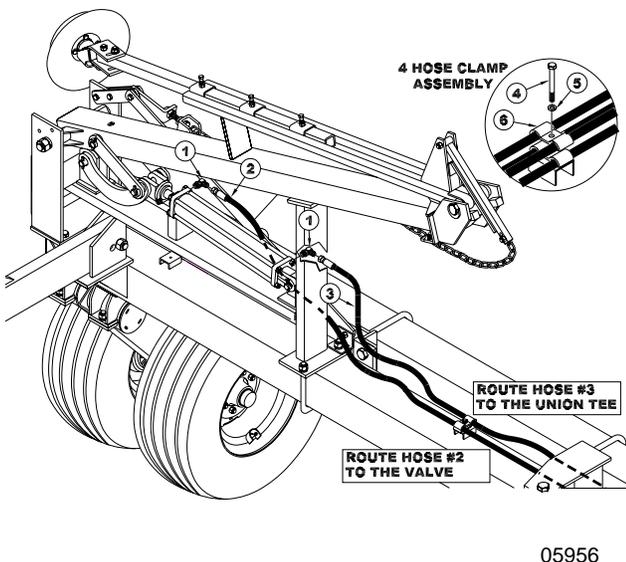


Figure 7
Row Marker Hydraulics on the Wing Frame

- Connect a 1/4" x 200" hose (30' Xpress Air Drill) or a 1/4" x 263" hose (#2) (40' Xpress Air Drill), to the elbow in the rod end of the row marker cylinder.
- Connect a 1/4" x 178" hose (30' Xpress Air Drill) or a 1/4" x 240" hose (#3) (40' Xpress Air Drill), to the elbow in the base end of the row marker cylinder.
- Route the loose ends of hoses (#2) & (#3) toward the centre of the Xpress Air Drill.
- Place pipe clamps (#6) over the hoses and insert a 3/8" x 2 1/2" hex bolt (#4) with a 3/8" lock washer (#5), through the pipe clamp and the bracket on the frame.

Centre Frame Hydraulic Assembly

- Insert 90 degree straight thread elbows (#1) as shown in Figure 8 on page 19, into the sequence valve (#10).
- Bolt the sequence valve (#10) to the valve mount (#5), using 3/8" x 2" hex bolts (#6), flat washers (#11) and lock nuts (#9).
- Attach the valve mount to the frame, using 3/8" x 1" hex bolts (#12), flat washers (#11) and lock nuts (#9).
- Connect hose (#3) coming from the right wing, to the right side of a union tee (#8).
- Connect hose (#2) coming from the right wing, to the right 90 degree elbow in the sequence valve.
- Attach a 1/4" x 200" hose (30' Xpress Air Drill) or a 1/4" x 263" hose (#2) (40' Xpress Air Drill), to the left 90 degree elbow in the sequence valve.
- Connect a 1/4" x 178" hose (30' Xpress Air Drill) or a 1/4" x 240" hose (#3) (40' Xpress Air Drill), to the left side of the union tee (#8).
- Attach a 1/4" x 100" hose (30' Xpress Air Drill) or a 1/4" x 173" hose (#6) (40' Xpress Air Drill), as shown in Figure 9 on page 20, to the 1/4" x 200" hose (#4).
- Connect a 1/4" x 100" hose (30' Xpress Air Drill) or a 1/4" x 173" hose (#6) (40' Xpress Air Drill), as shown in Figure 9 on page 20, to the 1/4" x 234" hose (#7).
- Route hoses (#4) and (#7) through the tongue. Connect the end of hose (#4) to the front of the union tee, and attach the end of hose (#7) to the 90 degree elbow located in the bottom of the sequence valve.
- Attach male connectors (#2) and male half hydraulic couplers (#1) as shown in Figure 9 on page 20, to the ends of hoses (#6). These hoses are routed through the tongue to the front of the Xpress Air Drill.

Assembly Conclusion

- Your Xpress Air Drill should now be fully assembled. Before proceeding any further, it is a good time to check that all of nuts and bolts are tight.

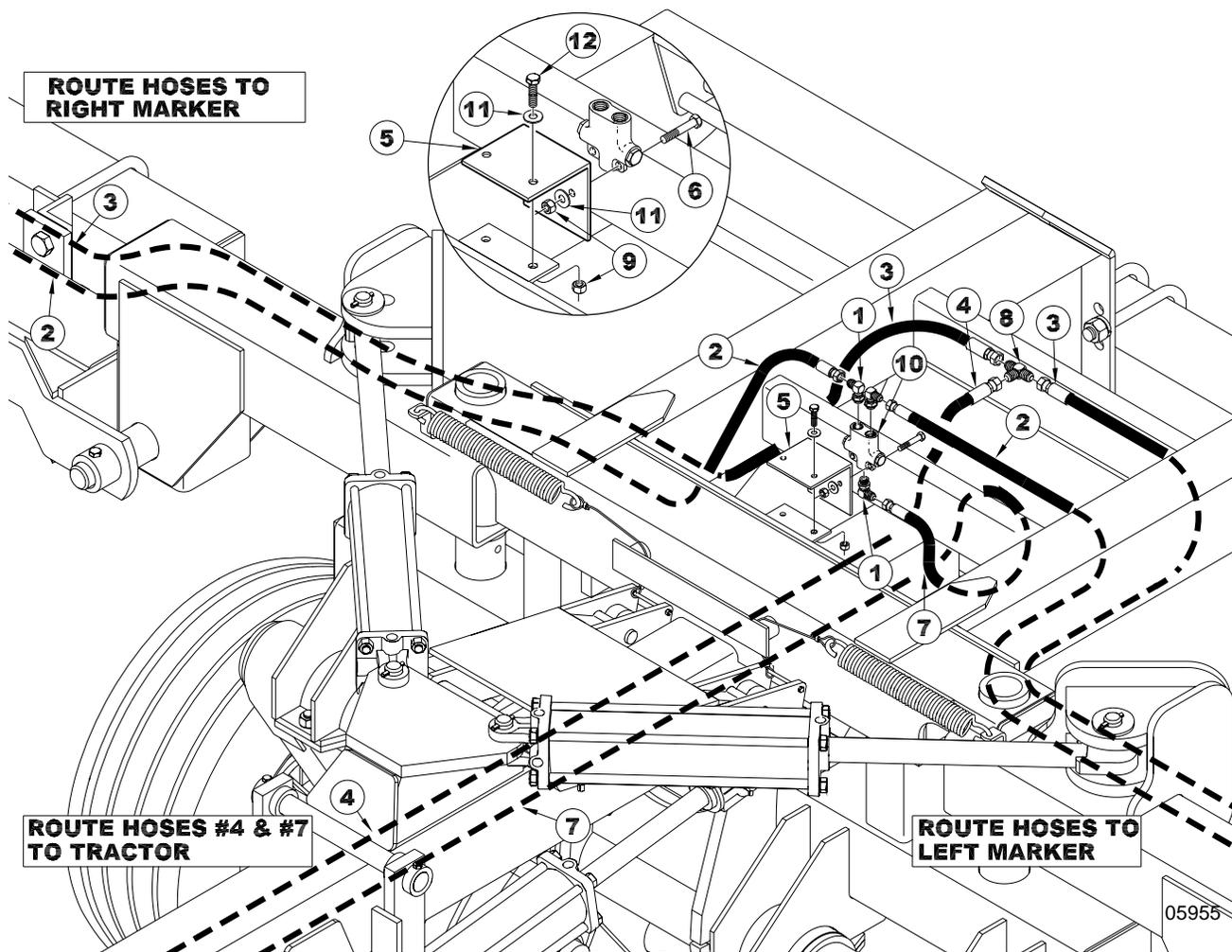
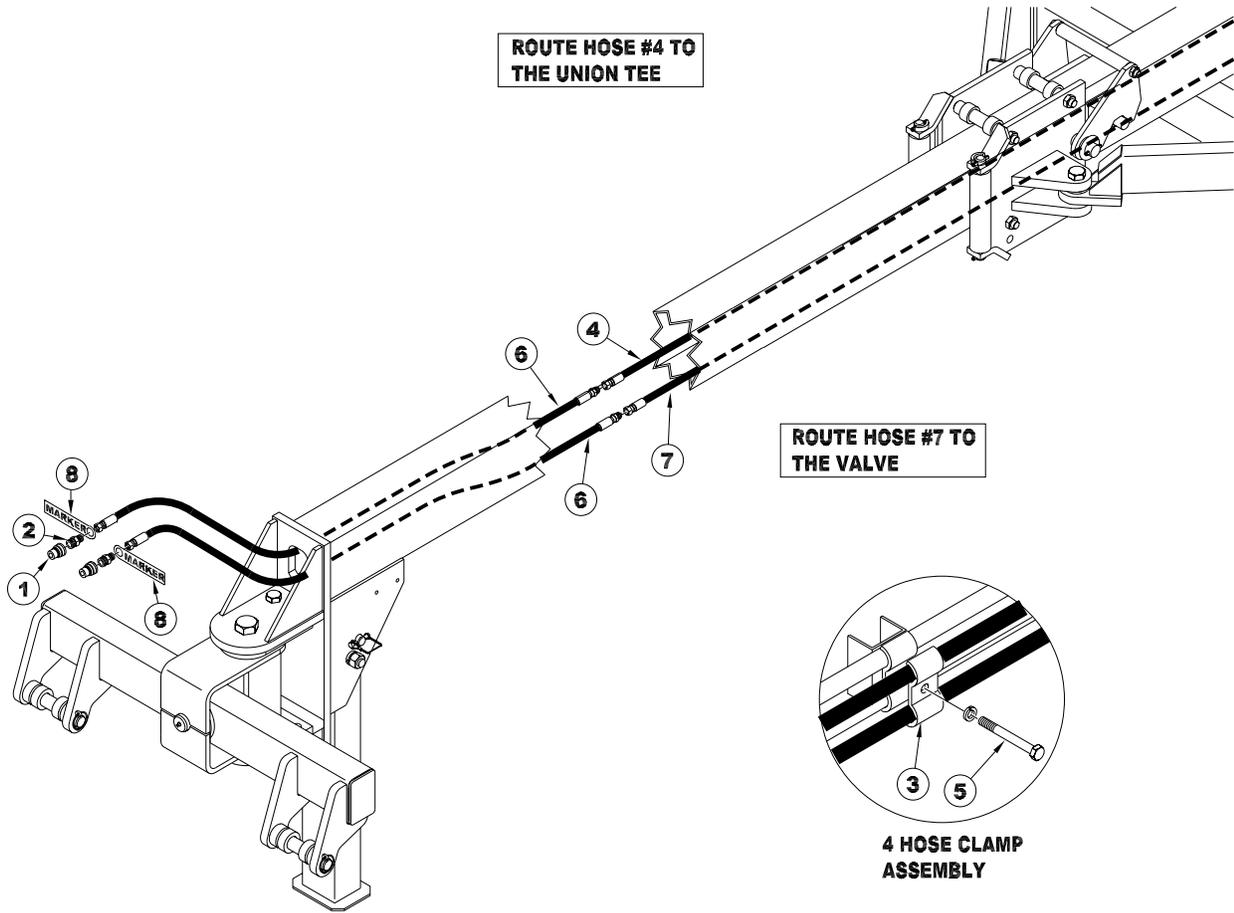


Figure 8
Row Marker Hydraulics on the Centre Frame

2. Check all hydraulic fittings and hoses to insure that they are tight.
3. Make sure that all moving parts turn freely and do not bind
4. Read and understand the Operating Section of this manual before continuing.



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Figure 9
Hose Routing for the Hydraulic Row Marker

Distribution Kit Layouts

The following diagrams represent layouts of the Distribution Kits on the Xpress Air Drill Units.

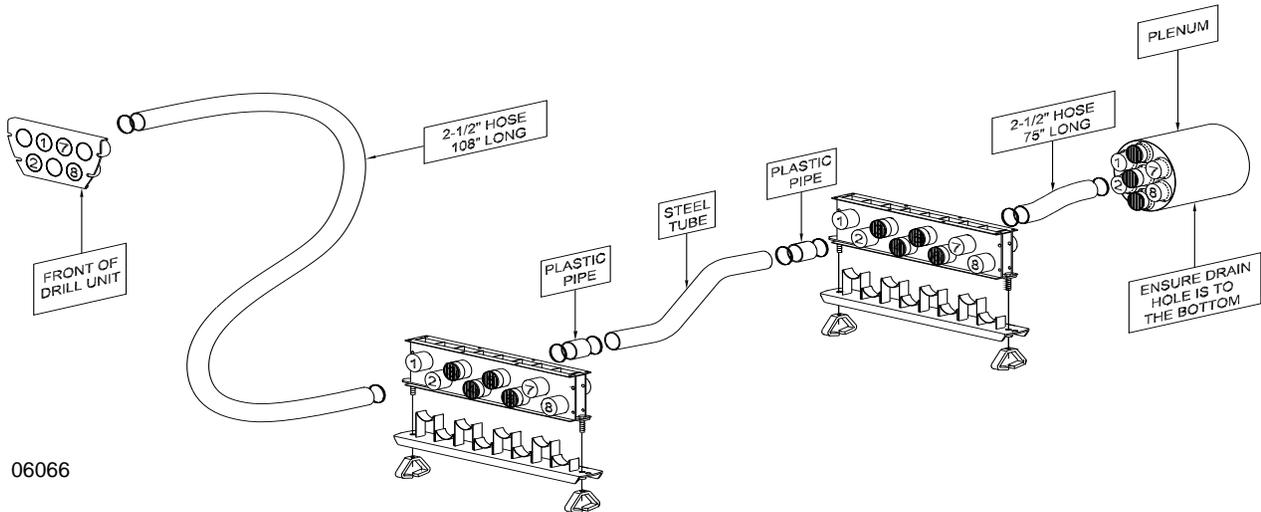


Figure 10
Primary Hose Diagram on Air Cart
(30' Xpress Air Drill, 10" Spacing with 36 Openers)

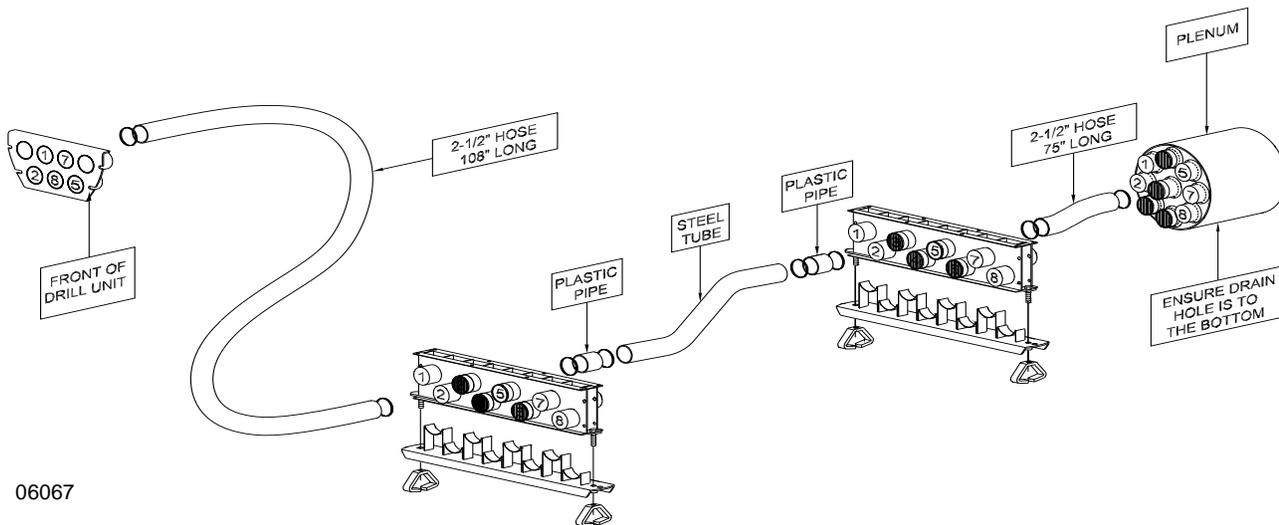
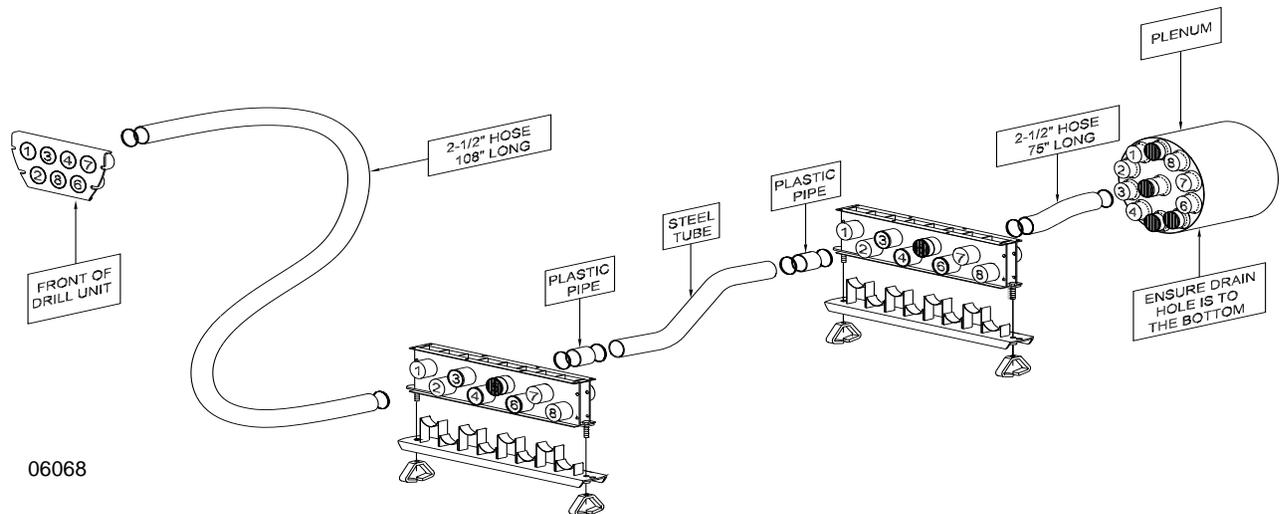


Figure 11
Primary Hose Diagram on Air Cart
(30' Xpress Air Drill, 7.5" Spacing with 48 Openers)
(40' Xpress Air Drill, 10" Spacing with 48 Openers)



06068

Figure 12
Primary Hose Diagram on Air Cart
(40' Xpress Air Drill, 7.5" Spacing with 64 Openers)

Note: Refer to the following pages for the primary and secondary hose lengths for your particular Xpress Air Drill. The lengths are approximate and do not have to be exact.

IMPORTANT: Use only hot water for lubrication when connecting the Primary and Secondary hoses. Do not use any type of petroleum based lubricant as this will damage the hoses.

PRIMARY AND SECONDARY HOSE LENGTHS						
30FT - 10" SPACING - 36 RUNS						
		LT WING	LT MAIN		RT MAIN	RT WING
PRIMARY		#1 - 96"	#8 - 120"		#2 - 120"	#7 - 96"
SECONDARY #1						
SECONDARY #2						
SECONDARY #3						
SECONDARY #4						
SECONDARY #5						
SECONDARY #6						
SECONDARY #7						
SECONDARY #8						
SECONDARY #9						
SECONDARY #10		N/R	N/R		N/R	N/R

06082

PRIMARY AND SECONDARY HOSE LENGTHS						
30FT - 7 1/2" SPACING - 48 RUNS						
		LT WING	LT MAIN	CENTER	RT MAIN	RT WING
PRIMARY		#1 - 96"	#5 - 120"	#8 - 120"	#2 - 120"	#7 - 96"
SECONDARY #1						
SECONDARY #2						
SECONDARY #3						
SECONDARY #4						
SECONDARY #5						
SECONDARY #6						
SECONDARY #7						
SECONDARY #8						
SECONDARY #9						
SECONDARY #10			N/R		N/R	

06081

PRIMARY AND SECONDARY HOSE LENGTHS							
40FT - 10" SPACING - 48 RUNS							
		LT WING	LT MAIN	CENTER	RT MAIN	RT WING	
PRIMARY		#1 - 120	#5 - 120"	#8 - 120"	#2 - 120"	#7 - 120	
SECONDARY #1							
SECONDARY #2							
SECONDARY #3							
SECONDARY #4							
SECONDARY #5							
SECONDARY #6							
SECONDARY #7							
SECONDARY #8							
SECONDARY #9							
SECONDARY #10			N/R		N/R		

06080

PRIMARY AND SECONDARY HOSE LENGTHS							
40FT - 7 1/2" SPACING - 64 RUNS							
	LT OUTER	LT INNER	LT MAIN	CENTER	RT MAIN	RT INNER	RT OUTER
PRIMARY	#1 - 132"	#3 - 96"	#6 - 120"	#8 - 120"	#2 - 120"	#4 - 96"	#7 - 132"
SECONDARY #1	66"	60"	102"	76"	98"	60"	66"
SECONDARY #2	74"	60"	93"	66"	95"	60"	74"
SECONDARY #3	85"	66"	102"	69"	95"	66"	85"
SECONDARY #4	102"	78"	106"	59"	103"	78"	102"
SECONDARY #5	86"	80"	109"	57"	108"	80"	86"
SECONDARY #6	97"	72"	102"	66"	96"	72"	97"
SECONDARY #7	78"	60"	108"	66"	108"	60"	78"
SECONDARY #8	60"	60"	108"	60"	104"	60"	60"
SECONDARY #9	56"	60"	108"	69"	108"	60"	56"
SECONDARY #10	N/R	N/R	N/R	62"	N/R	N/R	N/R

06069

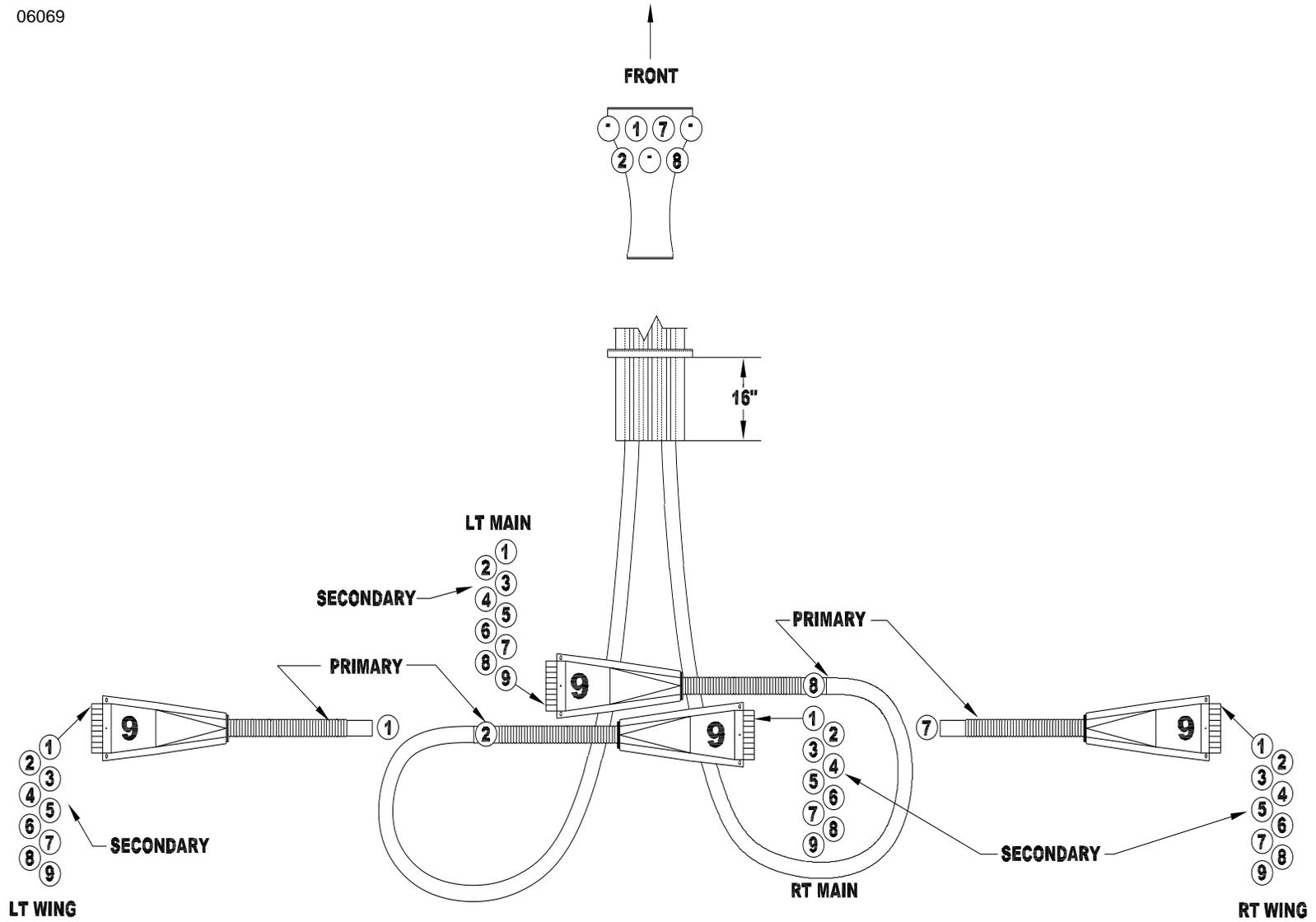


Figure 13
30' Xpress Air Drill, 10" Spacing with 36 Openers

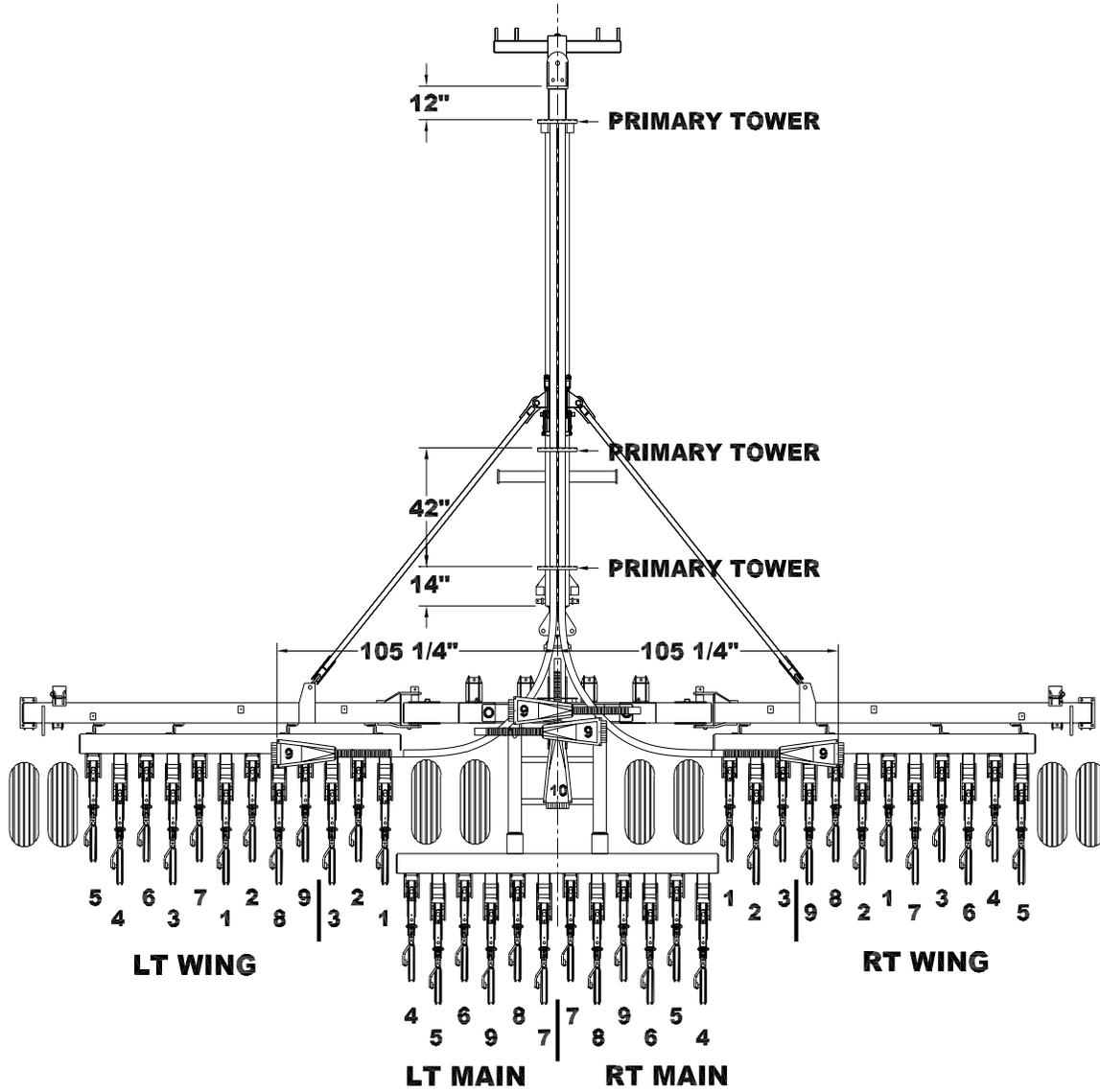


Figure 14
30' Xpress Air Drill, 10" Spacing with 36 Openers

06070

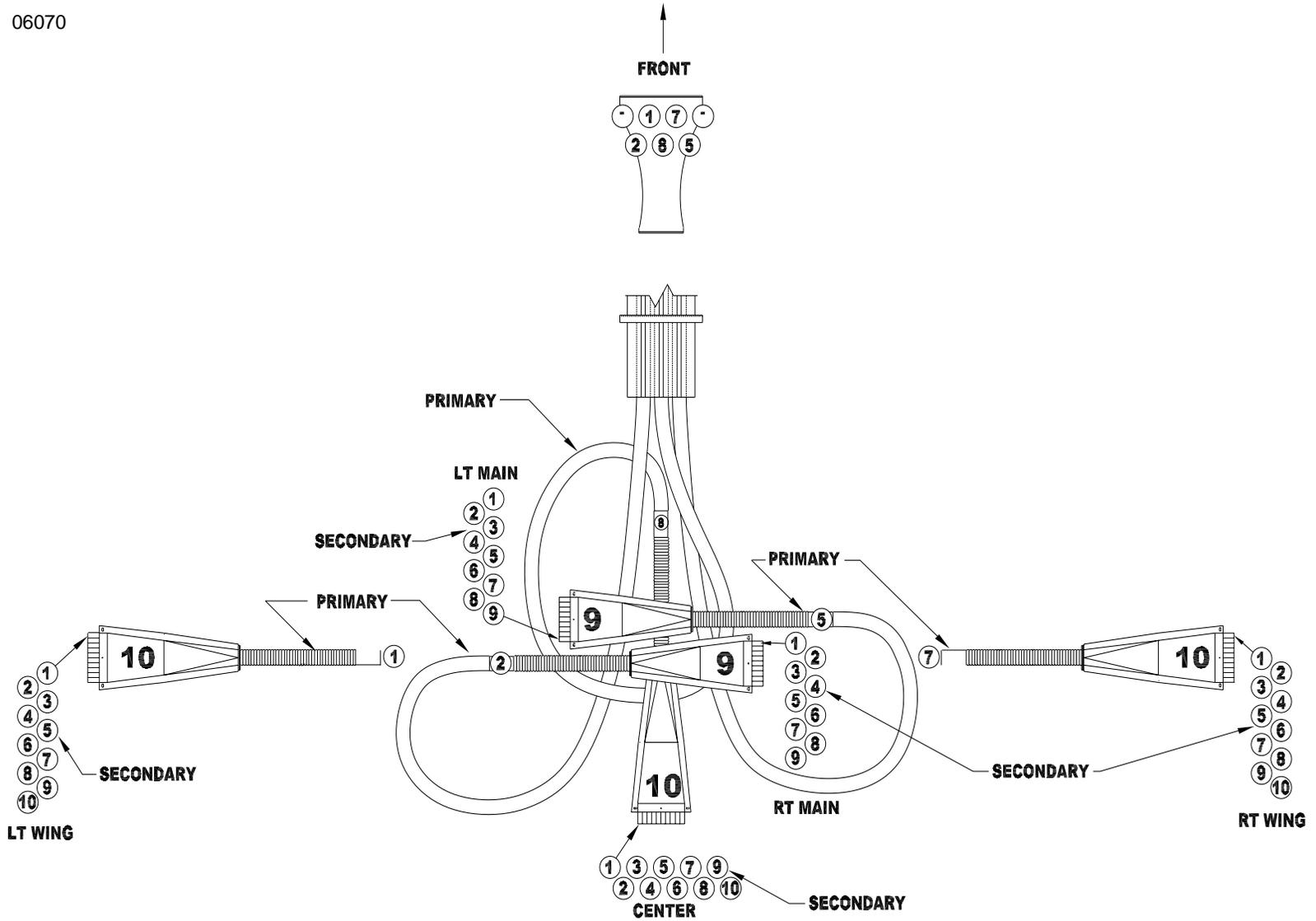


Figure 15
30' Xpress Air Drill, 7.5" Spacing with 48 Openers

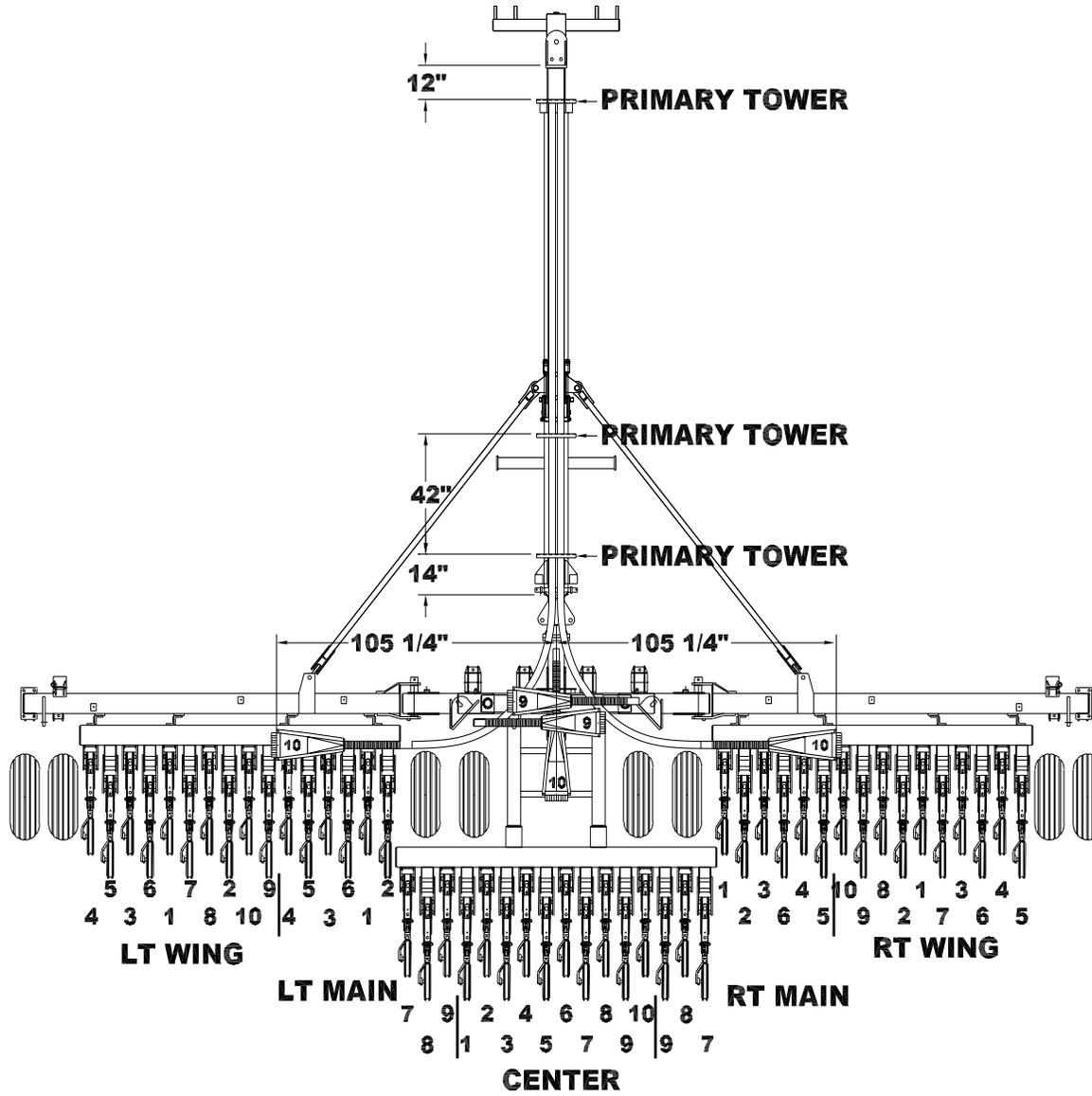


Figure 16
 30' Xpress Air Drill, 7.5" Spacing with 48 Openers

06071

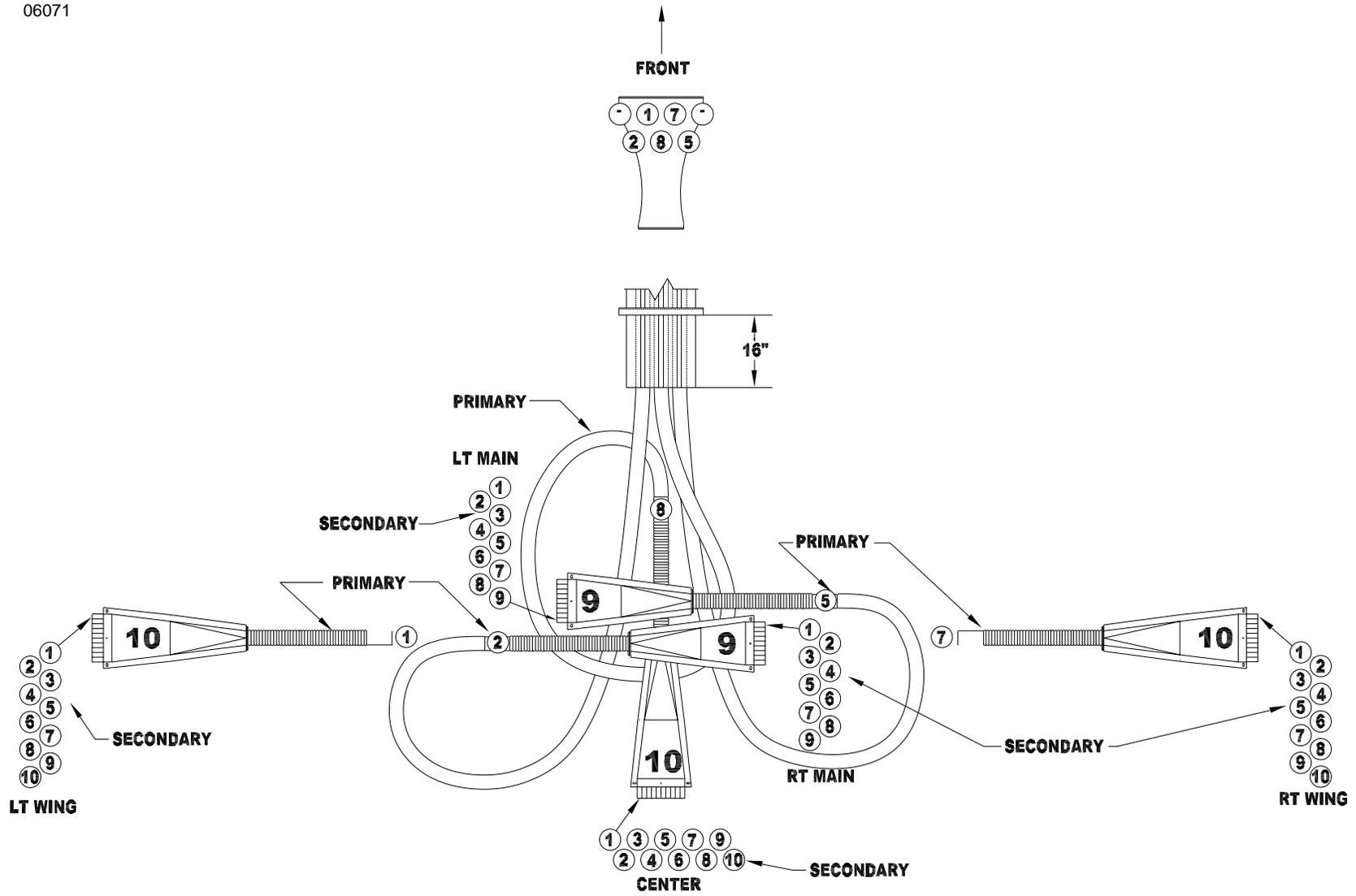


Figure 17
40' Xpress Air Drill, 10'' Spacing with 48 Openers

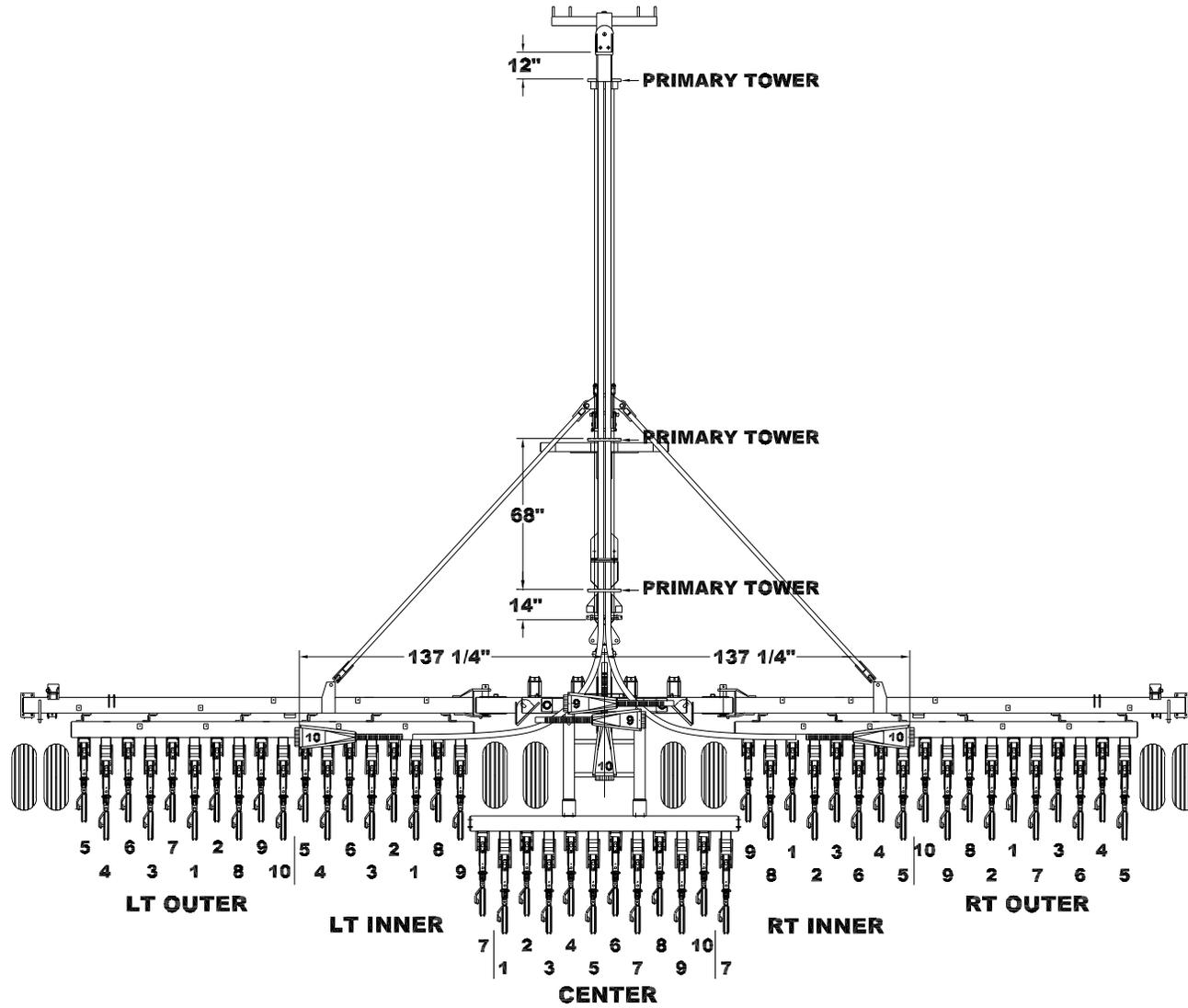


Figure 18

40' Xpress Air Drill, 10" Spacing with 48 Openers

06072

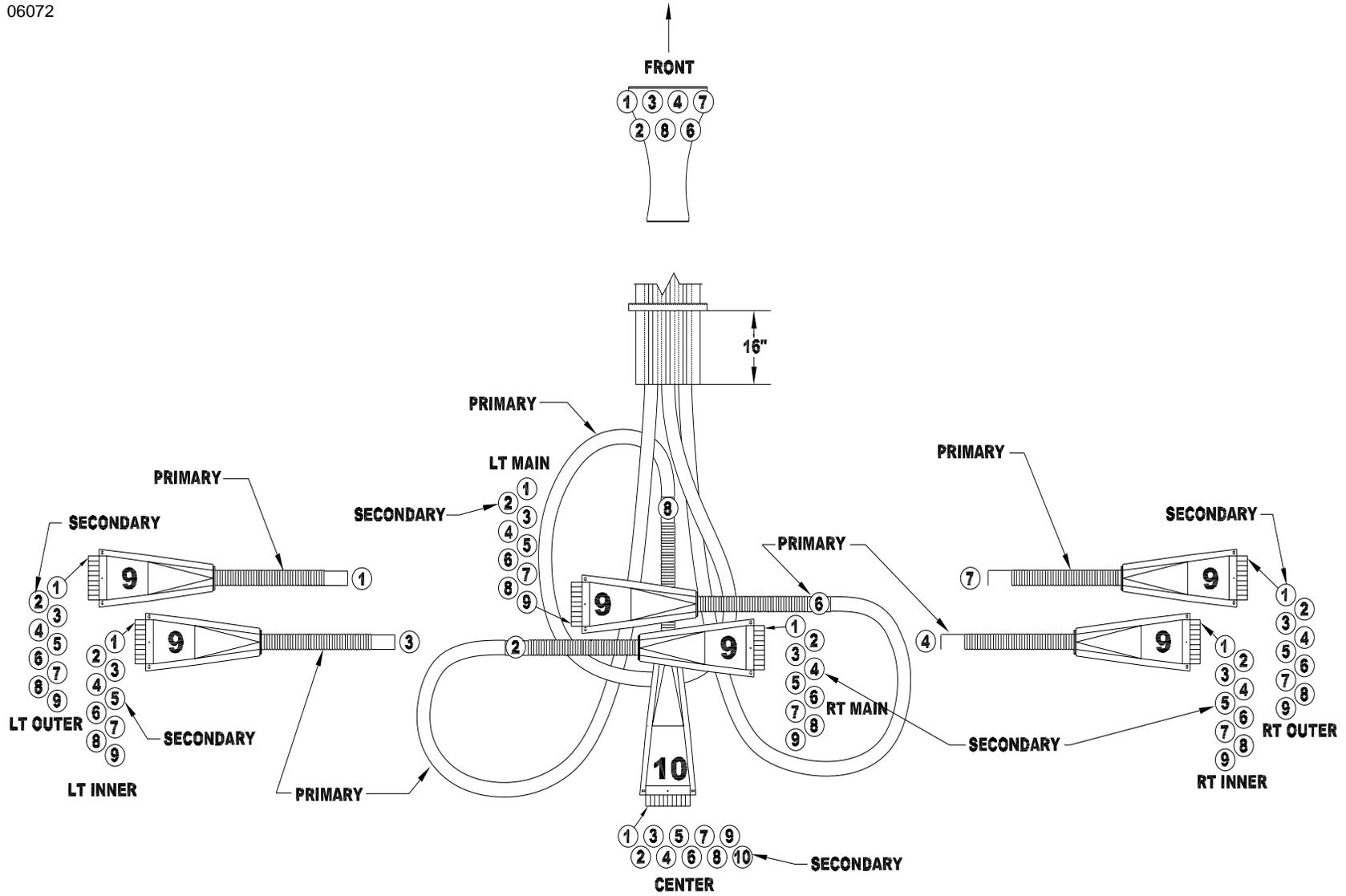


Figure 19
40' Xpress Air Drill, 7.5" Spacing with 64 Openers

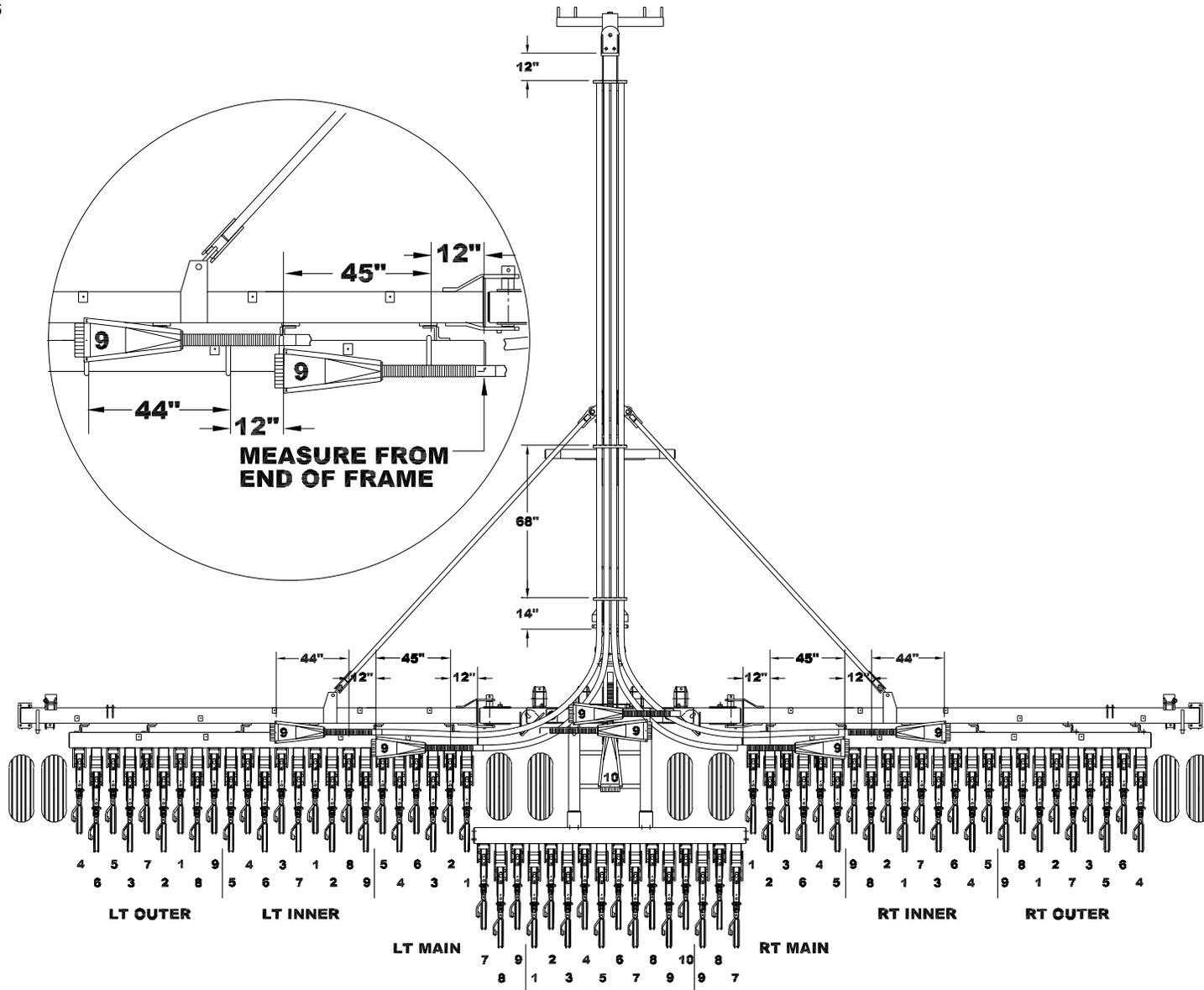
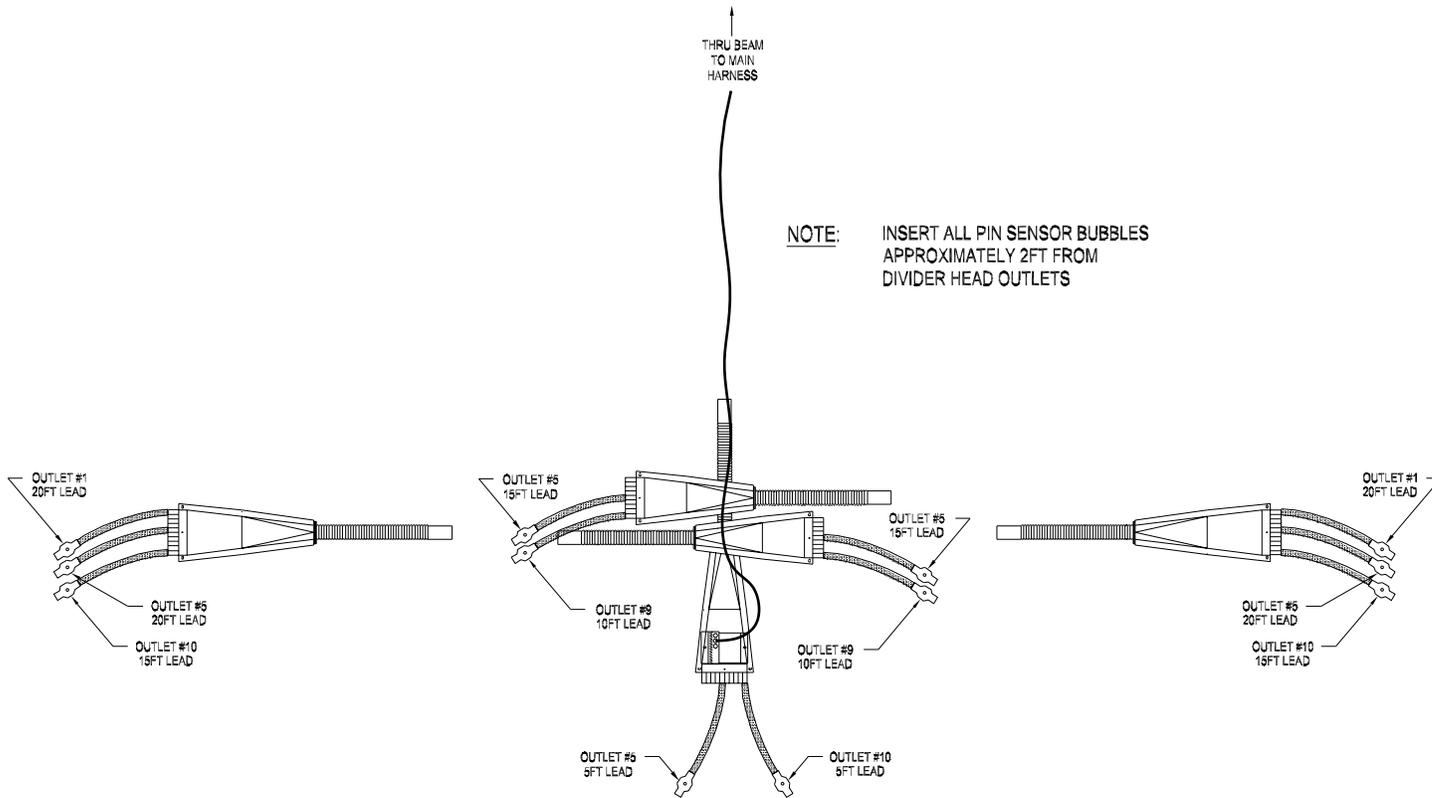


Figure 20
40' Xpress Air Drill, 7.5" Spacing with 64 Openers

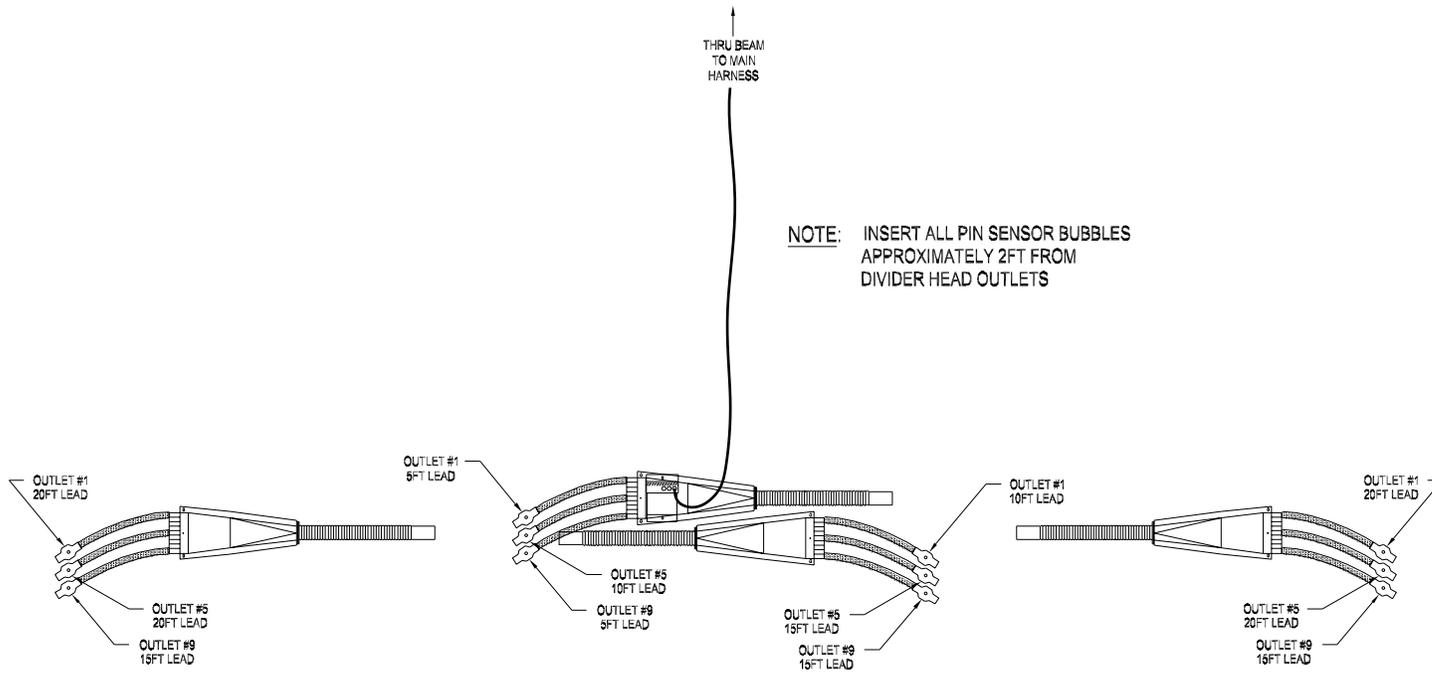
Blockage Module Layouts

The following diagrams represent layouts of the Blockage Modules on the Xpress Air Drill Unit.



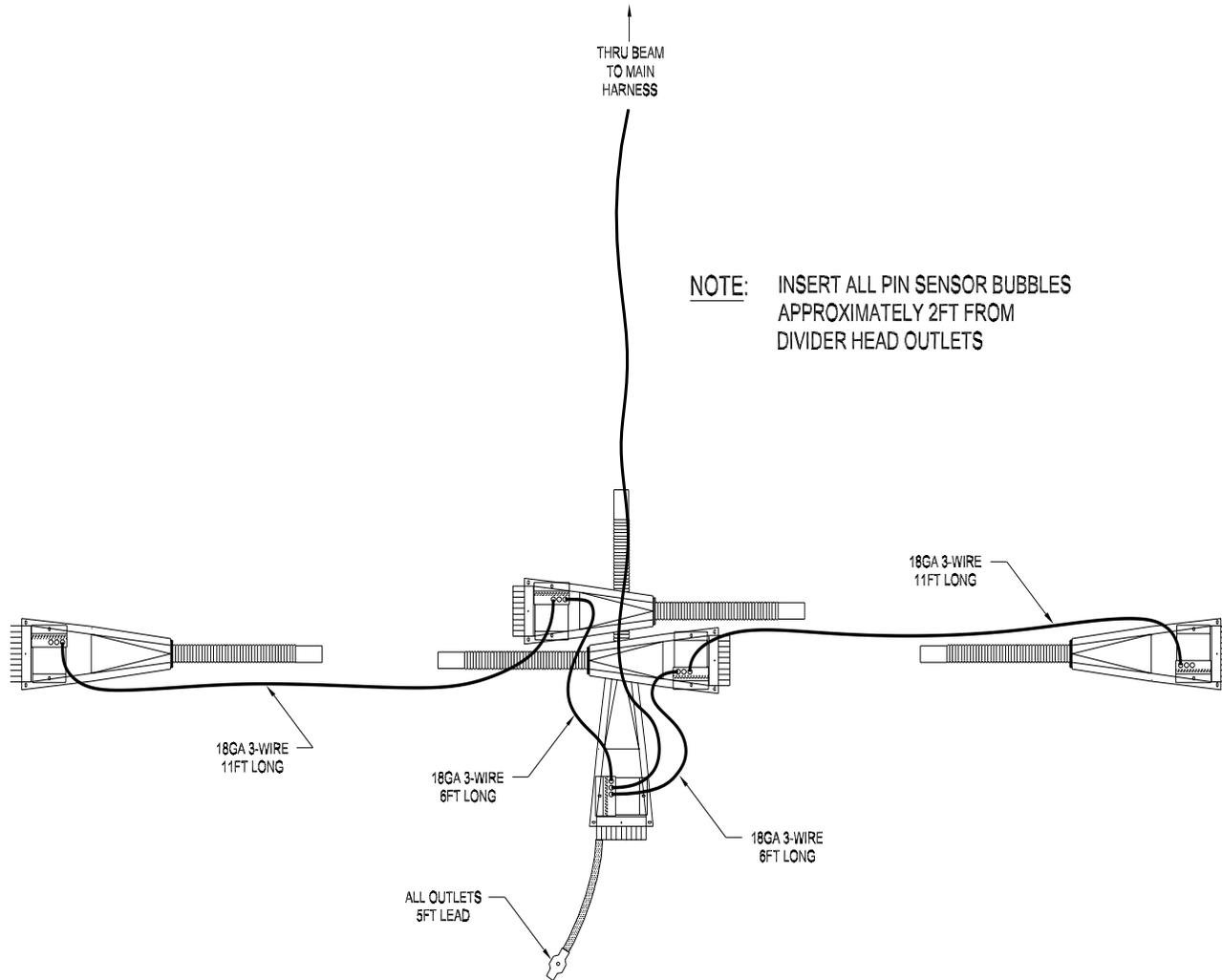
06136

Figure 21
30' Xpress Air Drill, 7.5" Spacing with 48 Openers (12 Run Blockage Module)



06135

Figure 22
30' Xpress Air Drill, 10" Spacing with 36 Openers (12 Run Blockage Module)



06140

Figure 23
30' Xpress Air Drill, 7.5" Spacing with 48 Openers (All Run Blockage Modules)

06139

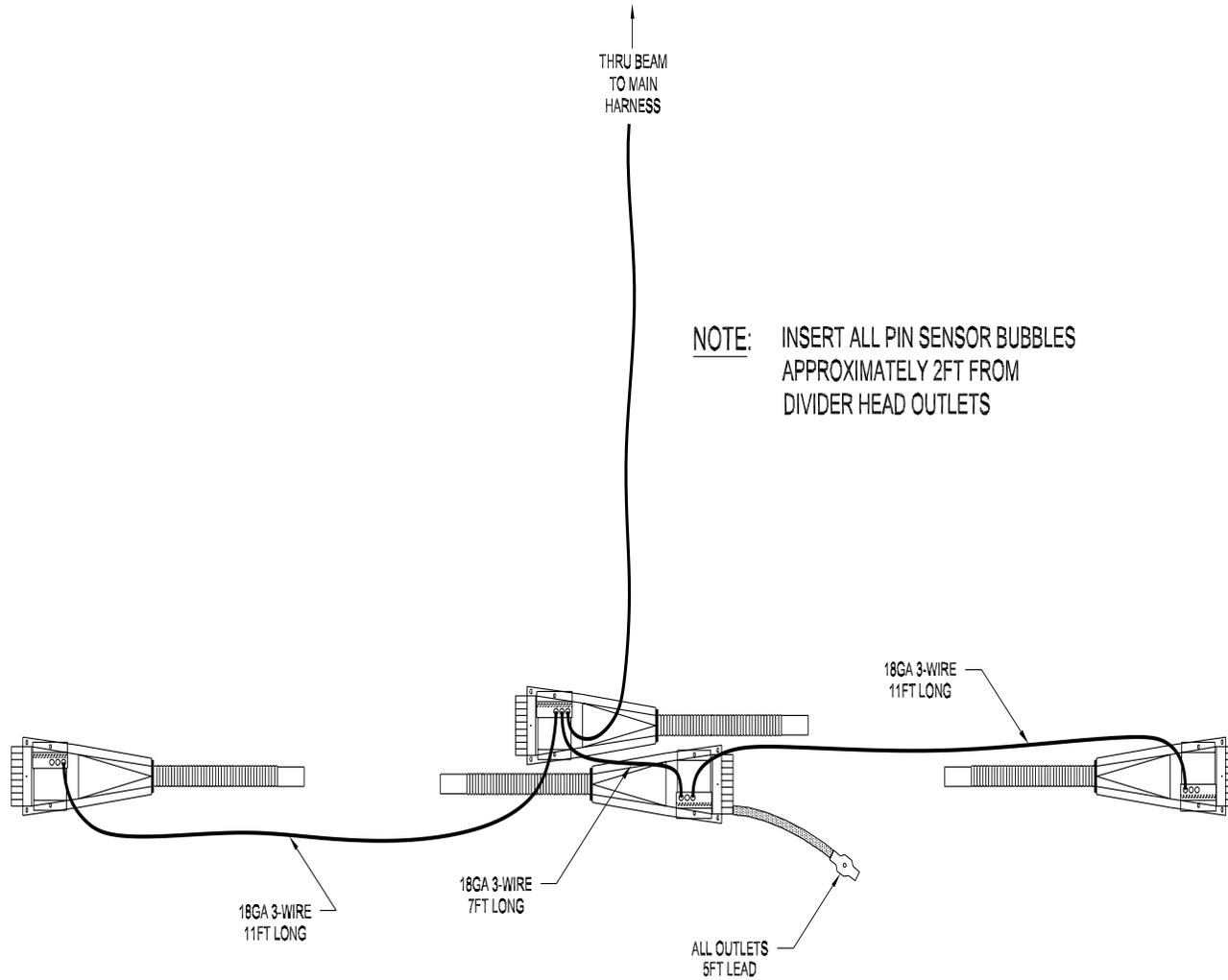
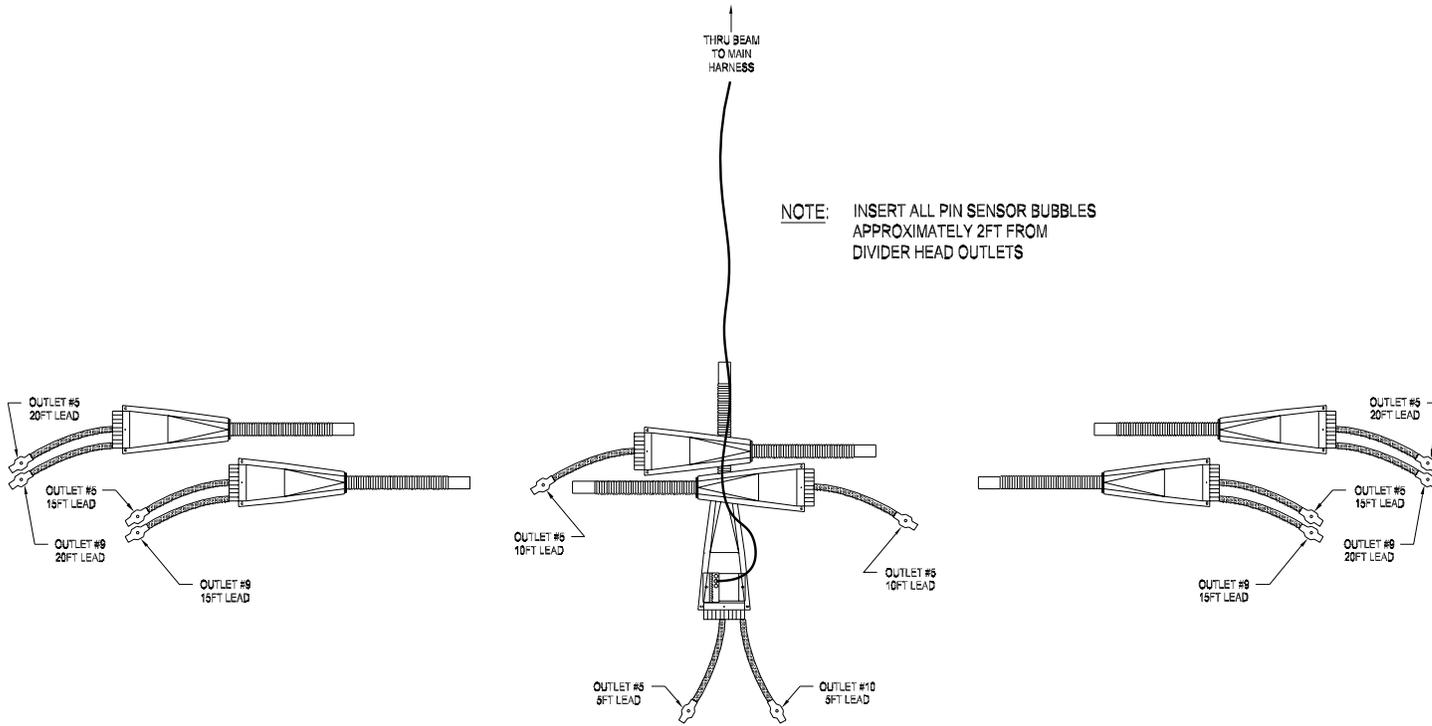
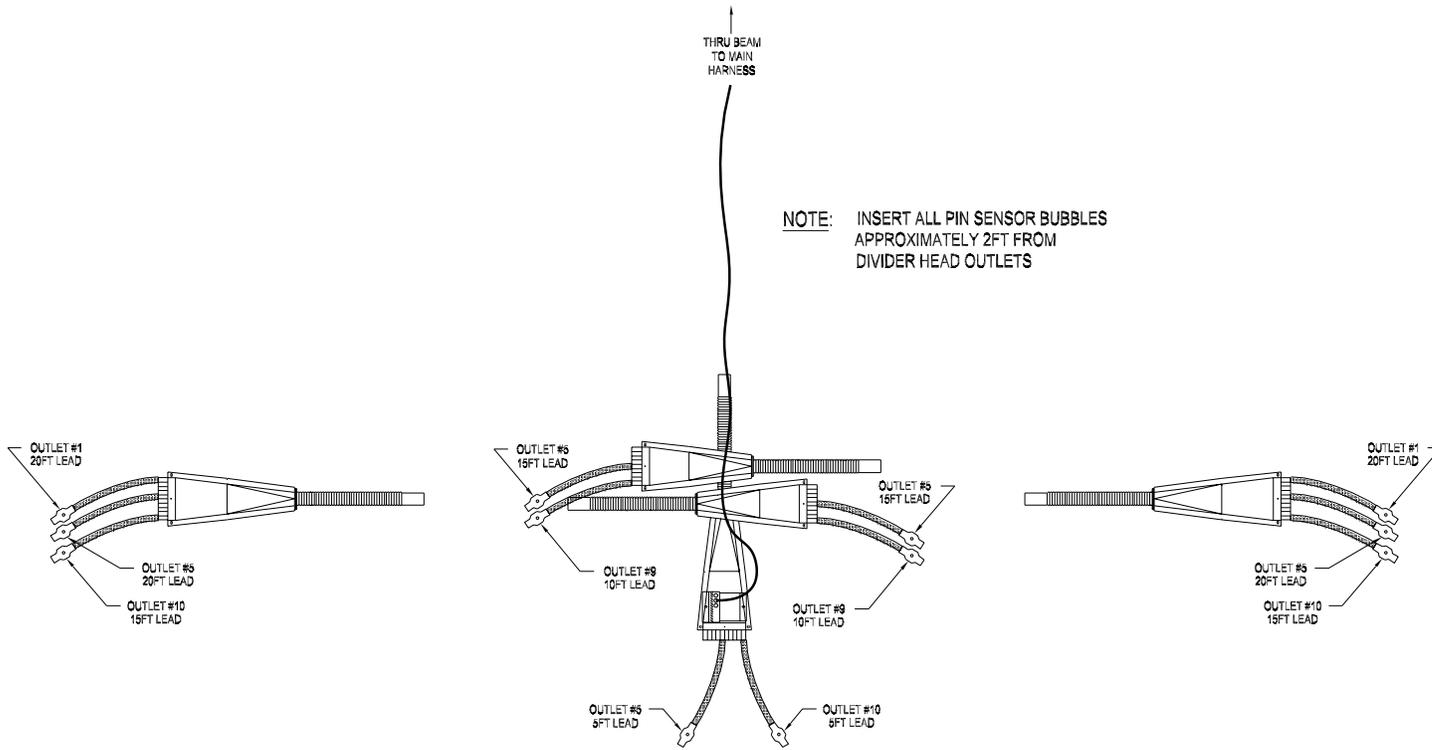


Figure 24
30' Xpress Air Drill, 10" Spacing with 36 Openers (All Run Blockage Modules)



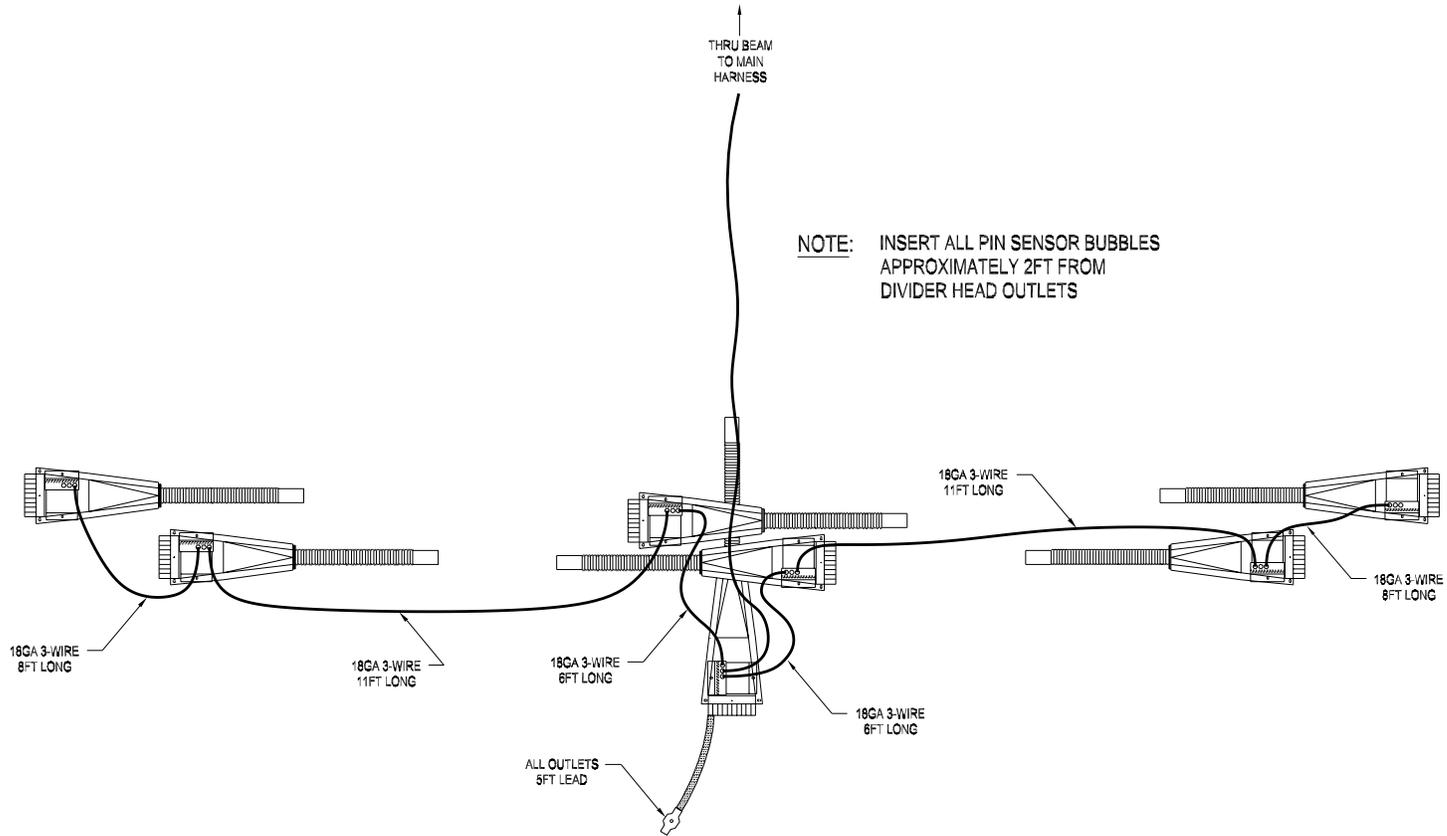
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Figure 25
40' Xpress Air Drill, 7.5" Spacing with 64 Openers (12 Run Blockage Module)



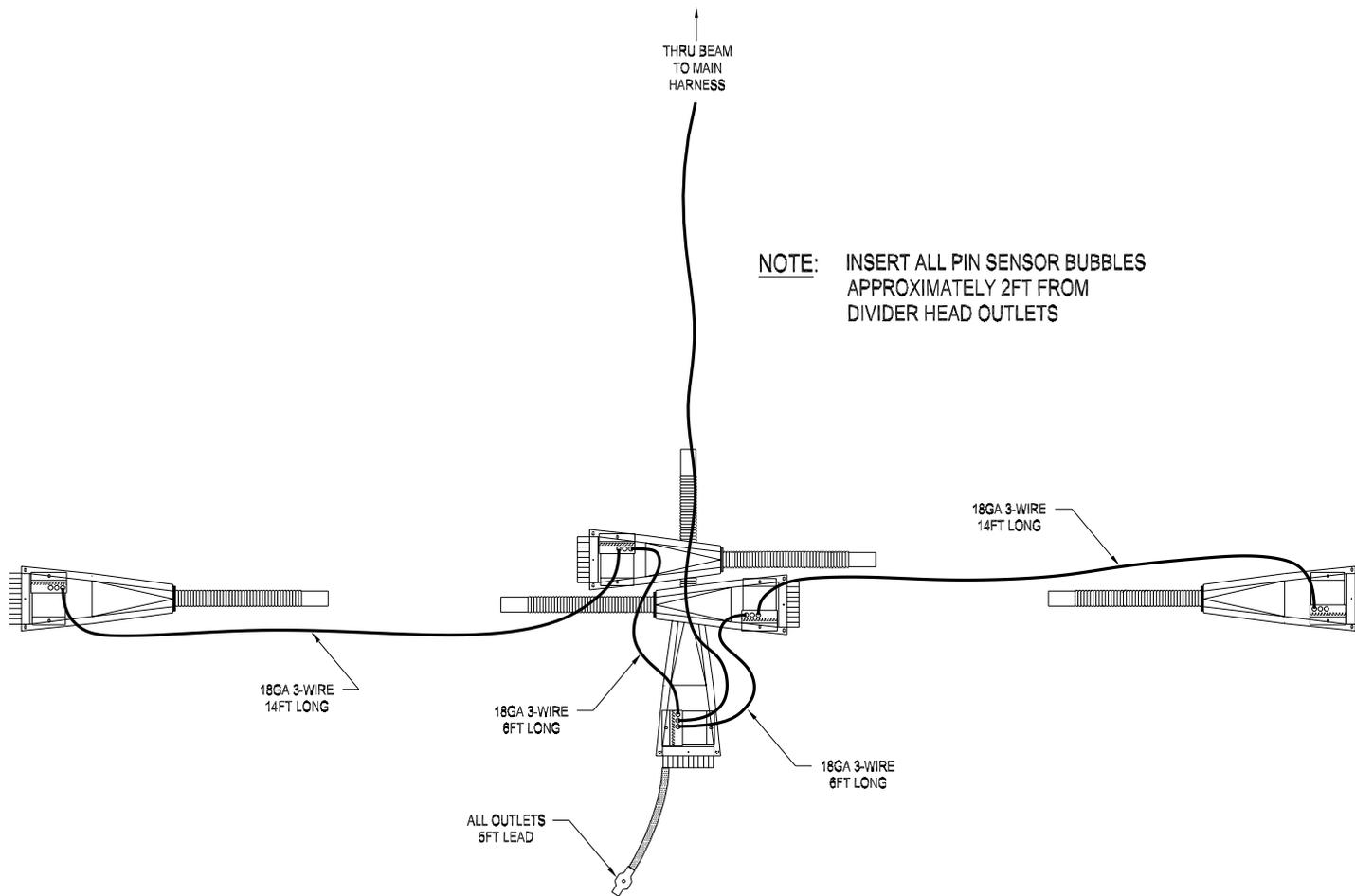
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Figure 26
40' Xpress Air Drill, 10" Spacing with 48 Openers (12 Run Blockage Module)



06142

Figure 27
40' Xpress Air Drill, 7.5" Spacing with 64 Openers (All Run Blockage Modules)



06141

Figure 28
40' Xpress Air Drill, 10" Spacing with 48 Openers (All Run Blockage Modules)

Operating Section

Connecting the Air Cart to the Xpress Air Drill Unit

1. Back the air cart up to the Xpress Air Drill unit and connect the two point hitch to the arms on the rear of the air cart. Secure the two point connection and fasten the safety chain.

DANGER

Do not allow anyone to stand between the air cart and the Xpress Air Drill unit when backing the cart up.

2. The hydraulics are marked with tags on the rear of the cart. Match the hose ends on the Xpress Air Drill unit when connecting them to the cart.
3. Raise the two-point lift on the rear of the cart and raise the parking stand on the Xpress Air Drill unit.

Initial Operating Check List

Your MORRIS Xpress Air Drill has been manufactured and assembled at the factory, utilizing optimum levels of quality control standards. However, before taking the Xpress Air Drill to the field, minor adjustments may be necessary for your field conditions. The following check points will help insure safe and efficient operation of your Xpress Air Drill.

1. Read through the operating section and service your machine accordingly.
2. Pay special attention to all safety suggestions.
3. Check the tire pressure. Tires should be equally inflated.
4. Visually inspect all opener assemblies. Check for freedom of movement on all moving parts.

DANGER

Always make sure the jack stand is lowered on the Xpress Air Drill unit when unhooking the tractor from the air cart.

Hydraulic Lift System

The rephasing lift system on the MORRIS folding Xpress Air Drill has been filled with oil and purged of air before leaving the factory. In the event of a hose rupture or cylinder replacement, the air trapped in the lines will need to be purged from the system.

WARNING

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Wear proper hand and eye protection when searching for leaks. Use a piece of cardboard or paper instead of your hand. If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene may result.

The cylinders are purged by connecting the lift system hoses to the tractor. Make sure the tractors reservoir is full of the manufacturers recommended hydraulic oil. Raise the unit and hold the tractor lever to allow oil to bypass and fill each wing cylinder. Lower the unit making sure the cylinders actuate simultaneously throughout the stroke. If the cylinders are not in unison, continue holding the cylinders extended and cycling the oil to purge any remaining air.

CAUTION

If cylinders are not in unison do not attempt to fully retract (lower the Xpress Air Drill). Damage to the centre lift may occur. Fully extend the cylinders (raise the Xpress Air Drill) to cycle oil through the system, then the cylinders should be in unison.

Do not loosen any hydraulic fittings. Recheck the tractors oil reservoir to make sure it is within operating limits.

Prior to starting any field operation, verify that all lift cylinders are operating in unison. If the cylinders are not operating together, hold the cylinders fully extended to cycle the oil through the lift system. During field operations with the Xpress Air Drill, always fully raise the unit when making turns. This will insure that the cylinders are working in unison and keep the Xpress Air Drill operating level.

Note: Retracting the cylinders during periods of storage will prevent rusting of the shafts and subsequent damage to the seals.

Hydraulic Fold System

Note: Keep all persons away from the Xpress Air Drill when folding or unfolding.

The hydraulic fold cylinders on the MORRIS folding Xpress Air Drill have been filled with oil and purged of air before leaving the factory. In the event of a hose rupture or cylinder replacement, the air trapped in the lines will need to be

purged from the system.

CAUTION

Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles which eject fluids under high pressure. Wear proper hand and eye protection when searching for leaks. Use a piece of cardboard or paper instead of your hand. If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene may result.

To purge the fold cylinders of air, unpin the rod ends of the cylinders, position cylinders to allow for rod extension and connect fold system hoses to the tractor couplers. Make sure the tractor reservoir is full of the manufacturers recommended hydraulic oil. Fully extend and retract the cylinders several times until the action is positive and immediately responsive. Do not loosen or crack any hydraulic fittings. Recheck the tractor reservoir to make sure it is within operating limits. Reconnect the cylinders to the Xpress Air Drill.

Xpress Air Drill Height & Leveling Adjustments

The top parallel link as shown in Figure 29, must maintain the 3/4-1" measurement from the parallel link stop during planting, or the opener will not function properly. To increase the distance from the top parallel link and the parallel link stop, simply lower the Xpress Air Drill. Raising the Xpress Air Drill will decrease the distance between the link and the stop.

Note: When the Xpress Air Drill is shipped new from the factory, stroke control segments (cylinder stops) are shipped with it. These segments are used to maintain the proper height when drilling.

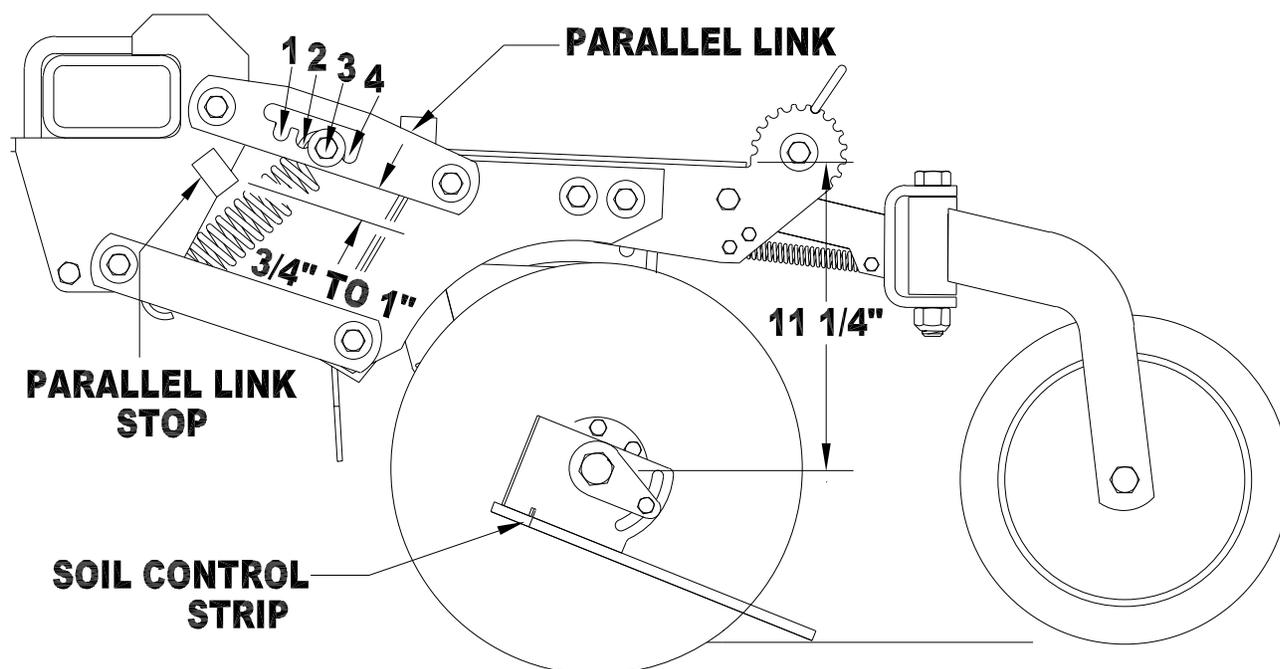
1. Lower the Xpress Air Drill down to achieve the 3/4" to 1" measurement between the top parallel link and the parallel link stop during drilling. Check this measurement on the inside openers toward the centre of the Xpress Air Drill.

Note: The when leveling the Xpress Air Drill from front to rear, always level the centre main frame of the Xpress Air Drill. The tongue may not be parallel to the ground when the centre frame is level.

2. When the desired planting depth and the 3/4" to 1" measurement are achieved, install the stroke control segments (cylinder stops) on the two centre lift cylinders.

Note: The stroke control segments (cylinder stops) must be installed only on the two centre lift cylinders. Do not install segments on the wing cylinders. The two centre lift cylinders will control the depth of the entire Xpress Air Drill.

3. After the stroke control segments (depth stops) have been installed on the two centre lift cylinders, check the measurement on the openers toward the outside on the ends of the wings. The measurement on the openers at the ends of the wings should also be 3/4" to 1". If the measurements are not the same, adjust the wings as shown in Figure 30 on page 48, to achieve the proper measurement on the opener.
4. Use the lift system to maintain proper Xpress Air Drill height in soft or loose soils.
5. When changing fields or different soil conditions (conventional to no-till or loose vs. firm soil), the depth settings should be checked again.



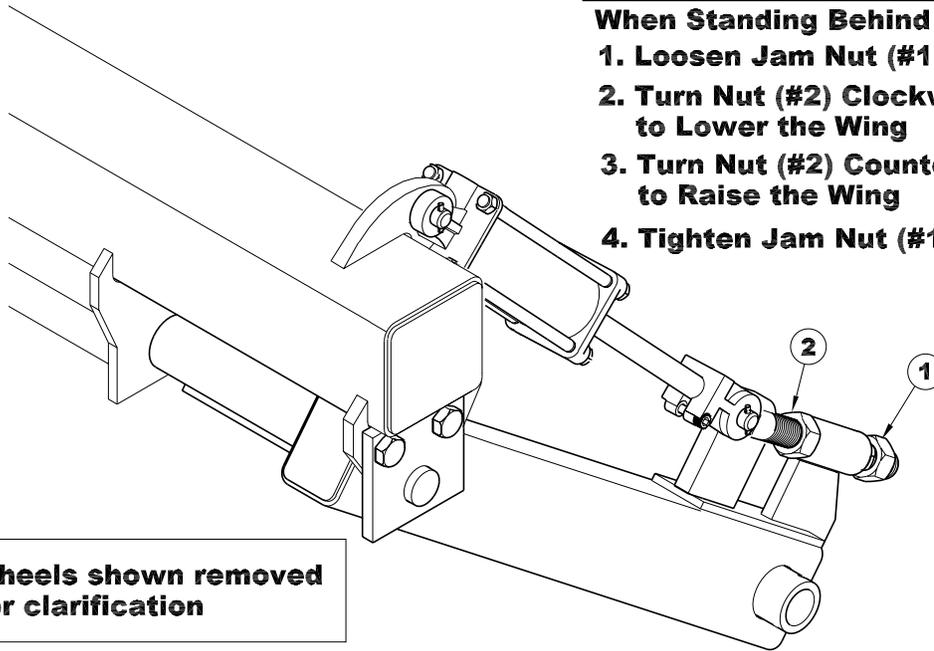
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Figure 29
Opener Adjustments

Wing Adjustment

When Standing Behind Drill

1. Loosen Jam Nut (#1)
2. Turn Nut (#2) Clockwise to Lower the Wing
3. Turn Nut (#2) Counter-Clockwise to Raise the Wing
4. Tighten Jam Nut (#1)



NOTE: Wheels shown removed for clarification

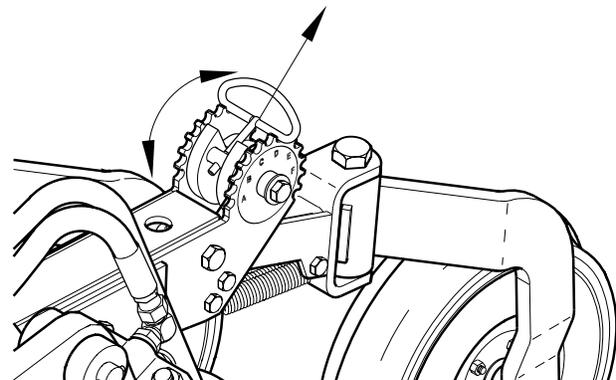
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Figure 30
Leveling the Wings (Side-to-Side)

Seeding Depth Adjustment

The seeding depth of each opener is controlled by the position of the depth cam assembly located on the back of the opener frame, as shown in Figure 31. To change the setting, pull the spring-loaded D-handle out of the notch while rotating the cam to a different setting, release the D-handle in the new notch. To decrease the seeding depth, rotate the cam to a notch more forward.

Note: Adjusting the opener down pressure does not change the seeding depth. The seed depth is controlled by the adjustment on the press wheel.



01465

Figure 31
Seeding Depth Control Adjustment

Opener Adjustments

Note: Adjusting the opener down pressure does not change the seeding depth. The seed depth is controlled by the adjustment on the press wheel. See "Seeding Depth Control Adjustment" on page 48.

The opener down pressure is adjusted, as shown in Figure 29 on page 47, by changing the notch setting on the top parallel link. The first notch, number 1, provides the least down pressure. The rear notch, number 4, provides the greatest down pressure.

Stop the tractor and raise the Xpress Air Drill until the openers are off the ground, move the adjustment bolt from one notch to the other by grasping each end of the bolt and moving it to the new notch setting.

Initially set all of the openers in the same notch. Lower the Xpress Air Drill until the 3/4" -1" measurement as shown in Figure 29 on page 47, is reached on all of the openers. Next measure the two centre main frame master lift cylinders. Measure from the cylinder head casting to the clevis on the rod end of the cylinder to determine how many stroke control segments are needed to hold the Xpress Air Drill at this height.

Place the same number of stroke control segments on the two master lift cylinders. The outer slave cylinders on the wings do not require any segments, they will stop when the master cylinders reach the stroke control segments.

Openers behind the tire tracks might require additional down pressure for uniform seed placement. Place the openers in the tire tracks in a higher setting if more down pressure is required.

Soil Firming Device Adjustment

The purpose of the firming device is to prevent blowout and to minimize soil and residue disturbance. For most seeding conditions, the firming device angle should be set at approximately 11 1/4" measurement as shown in Figure 29 on page 47. If you are seeding excessively deep or shallow, you may need to change the angle of the firming device to match your conditions.

Rigid Scraper Adjustment

The rigid scrapers should maintain slight contact with the inside of the blades for best performance. If adjustment is required, loosen the two mounting bolts and adjust the scraper. Tighten the mounting bolts.

Maintaining Proper Pinch Point

The point at which the two opener blades contact each other is called the pinch point. The pinch point must be properly setup with the right amount of pressure to maxi-

mize performance and extend blade and bearing life. If the pressure is too tight, excessive wear, bearing failure and plugging may occur. If the pressure is too light, bearing failure and seed trench deterioration may result.

Checking For Loose Pinch Point

With the openers off the ground, grasp a blade from behind and rotate it in a forward direction. The pinch point pressure should be adequate enough to rotate both blades while turning only one. A slight loss of contact during rotation is acceptable. Ideally, you want full contact between the blades during rotation.

If the blades are loose, shims must be removed from behind the opener blades to move them closer together. As blades wear and bearings break in, shims should be removed. Remove the number of shims necessary to maintain pinch point. Store the shims on the other side of the bearing under the dust cap.

Checking For Tight Pinch Point

With the openers off the ground, grasp each blade from behind and rotate them independently in the opposite direction from each other. The blades should glide against each other easily without binding.

If the blades bind or work against each other while rotating, shims need to be installed between the opener bar and the blade to space them apart. When new blades are installed, shimming is sometimes required. Add the number of shims necessary to maintain pinch point.

Adding Or Removing Shims

Note: Each shim is equal to 1/32" at pinch point.

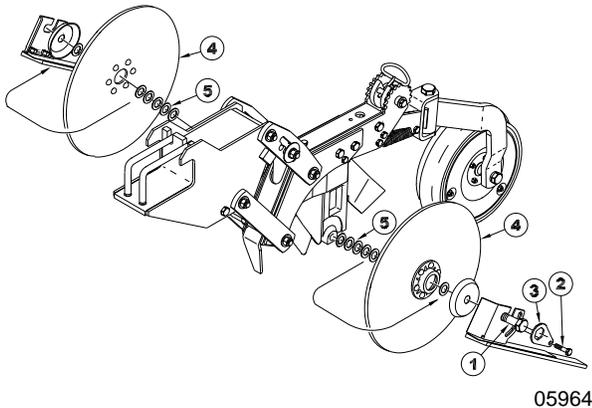


Figure 32
Pinch Point Adjustment

1. To add or remove opener shims, as shown in Figure 32, loosen the 3/4" bolt (#1) (the left side has left hand threads) that mounts the blade to the opener bar. If the Xpress Air Drill is equipped with soil control devices, remove the locking arm 3/8" bolt (#2) and the locking arm (#3) first.
2. Slowly remove the blade (#4) and bolt (#1) together being careful not to drop and lose any shims (#5) on the ground. Remove the 3/4" bolt (#1) and transfer the shims (#5) from one side to the other, depending on the adjustment required.
3. Insert the bolt (#1) through the blade bearing and place the shims (#5) on the end of the bolt, against the bearing. Reattach the blades (#4) to the opener bar with the 3/4" bolt (#1).
4. Tighten the bolts and recheck the pinch point pressure, as described above. Install the soil control devices, and set the angle while tightening the 3/4" bolt (#1). Again check the pinch point pressure as described above. If the pinch point pressure is correct, attach the locking arm (#3) and the locking arm 3/8" bolt (#2).

Unfolding And Folding The Xpress Air Drill

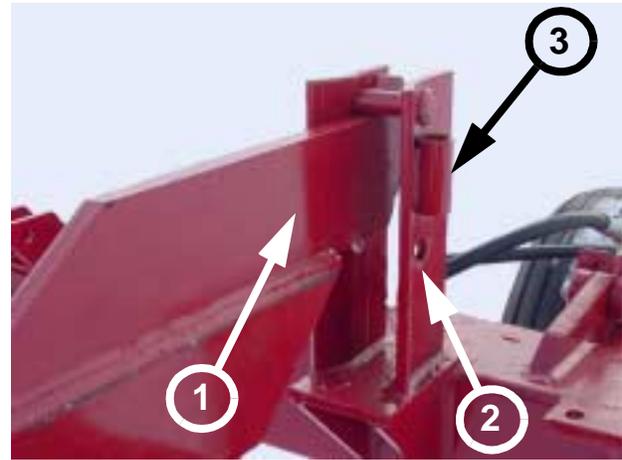


Figure 33
Transport Lock Bar

Note: The folding and unfolding operation of the MORRIS Xpress Air Drill should be done on smooth terrain.

Unfolding Instructions

1. The transport bar (#1), as shown in Figure 33, locks the wing frames in position for transport by a 1" x 6" transporting pin (Pin has been removed for picture). When the machine is folded for transport, the pin should be inserted through the hole (#2). This pin (shown removed) must be removed to unfold the Xpress Air Drill. Store the pin in the holder (#3), to prevent loss.

Note: Make sure the bolts that connect the wing braces to the tongue latch are tight. Periodically check these bolts to see that they are kept tight.

2. Make sure the slide hook (#1), as shown in Figure 34, is lowered to allow automatic locking of tongue latch.

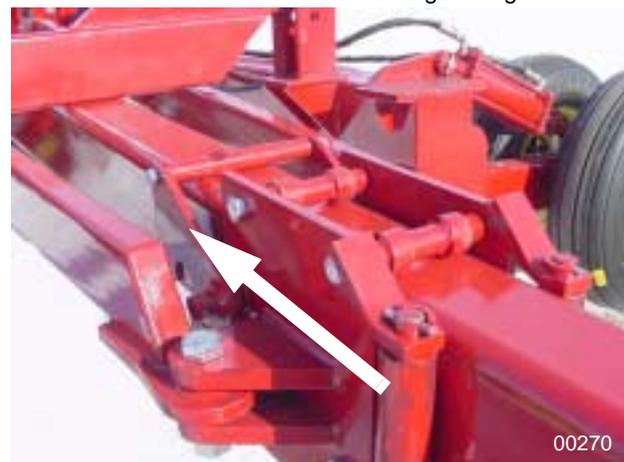
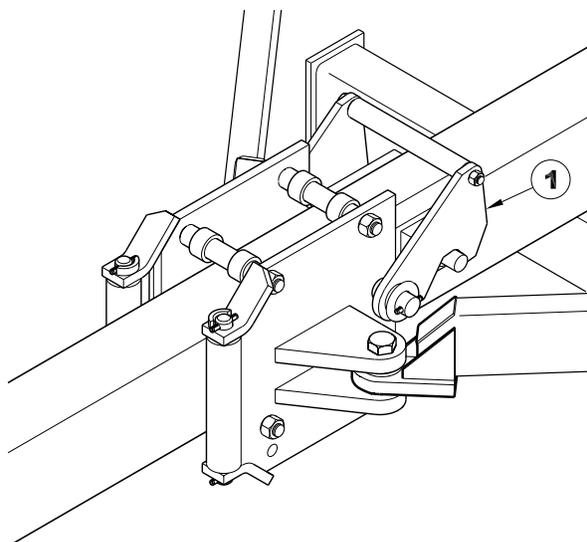


Figure 34
Slide Lock Assembly In Position for Unfolding the Drill

3. Raise the Xpress Air Drill completely.
4. Lower the air cart's 2-point lift arms. This allows the transport bar to clear the lock pin. Now you are ready to unfold.
5. Place the tractor in neutral - NOT PARK. This allows the Xpress Air Drill to pull the tractor backward and forward, allowing the wing lift arm wheels to roll more easily instead of a sliding motion.

Note: Always keep your tractor idled down as slow as possible. Be sure the Xpress Air Drill tongue is low enough for the transporting bar to clear the lock bracket.

6. Slowly activate the lever on the air cart that controls the hydraulic fold cylinders. This will allow the Xpress Air Drill wings to unfold. During this procedure, the slide lock will slide toward the back of the machine. After the cylinders are fully extended, move the tractor ahead until the tongue latch is engaged.
7. Once the slide lock is locked in position as shown in Figure 35, the unfolding operation is complete.



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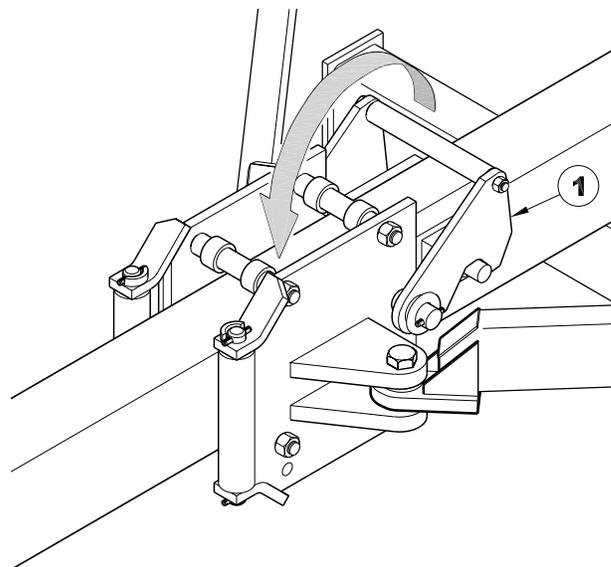
Figure 35
Slide Lock Engaged After Unfolding Xpress Air Drill

Folding Instructions

1. The Xpress Air Drill folds basically the same as it unfolds. Raise the Xpress Air Drill up with the lever that controls the hydraulic lift cylinders.

Note: Never fold the Xpress Air Drill while it is in the ground.

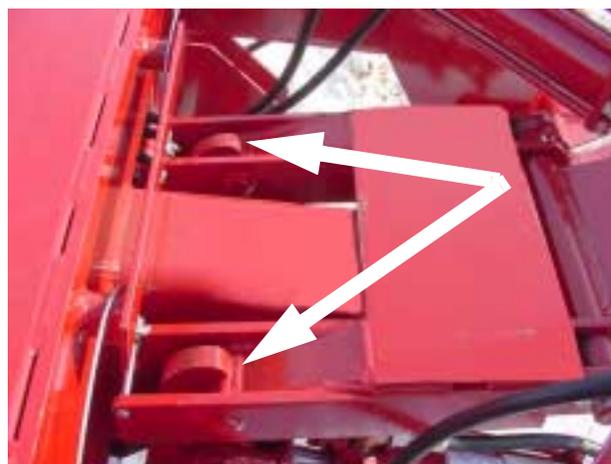
2. Unlatch the slide hook (#1), as shown in Figure 36, by rotating it forward in the direction of the arrow to unlatch the hook.



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Figure 36
Unlatching the Slide Lock Hook

3. Lower the 2-point arms on the air cart just enough so that the transport bar will clear the transport locking pin when the Xpress Air Drill is completely folded.
4. Slowly activate the lever on the tractor that controls the hydraulic fold cylinders, and the Xpress Air Drill will begin to fold. Once the Xpress Air Drill is fully folded, lift the air cart's 2-point lift arms. This places the transport bar in a locked position.
5. Check to see if the transport lock is in the locked position as shown in Figure 37. Using the lever in the tractor that controls the lift cylinders, raise the wing lift arms (lower the Xpress Air Drill).



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Figure 37
Transport Lock in Locked Position

- Place the 1" x 6" transport pin, under the transport bar in hole (#2) as shown in Figure 33 on page 50. The Xpress Air Drill is now in the transport position.

Note: If the wings will not fold completely in so the transport lock bar will latch as shown in Figure 33 on page 50, make the necessary adjustments in the following steps.

- Loosen the jam nut (#2) as shown in on the inside of the mount shown in Figure 38. By tightening the nut (#1) on the outside of the mount, the stroke of the fold cylinder will lengthen which will bring the wings together at the front of the Xpress Air Drill. Make equal adjustments to each side.

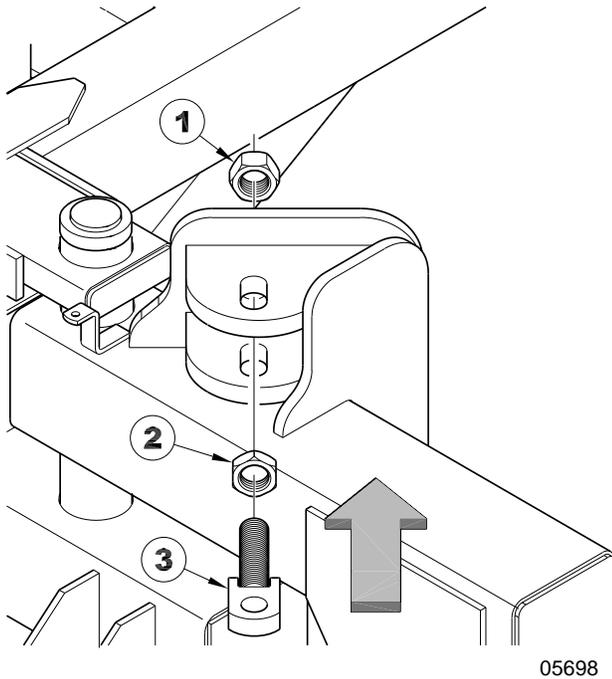


Figure 38
Wing Fold Adjustment Bolts

- Small adjustments to the bolts (#3) will bring the wings in a significant distance. Measure the starting dimension before adjusting the rear nut so the same adjustment can be made to the other side.

Note: Before transporting the drill, adjust the center drill section depth cam assemblies on the press wheels to the notch between A & B as shown in Figure 39.

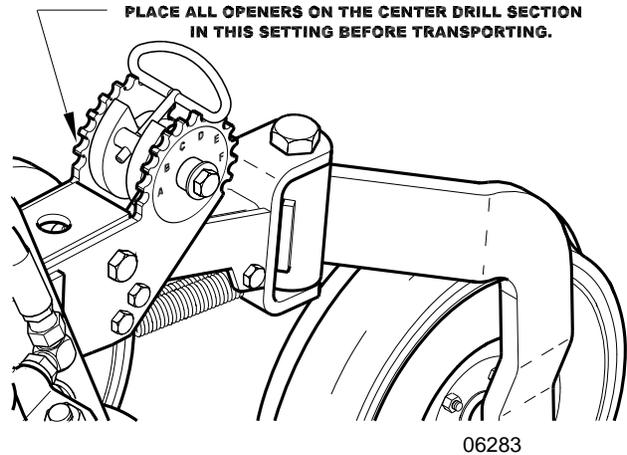


Figure 39
Depth Cam Transportation Setting

Lubrication

Your MORRIS Xpress Air Drill is designed to give maximum service life, but a lubrication and maintenance schedule must be followed.

The machine should be thoroughly greased with a multi-purpose grease after initial setup and prior to the first field operation. Greases that may be used are SAE Multipurpose EP grease with 3 to 5 percent molybdenum disulfide or SAE multipurpose EP grease.

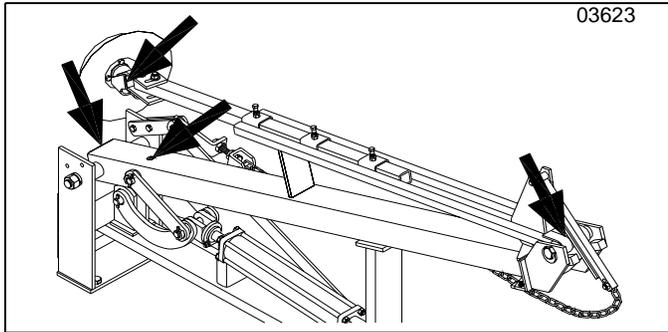
Lubricating and regular servicing of the Xpress Air Drill will insure long life and maximum performance of moving parts. Wipe dirt from the grease fittings before lubrication. If a grease fitting is lost, replace it immediately.

The following illustrations in the "Lubrication Section" on page 31, show the locations of the grease fittings.

Lubrication Section

The following illustrations in this section show location of the areas needing lubricated and the frequency.

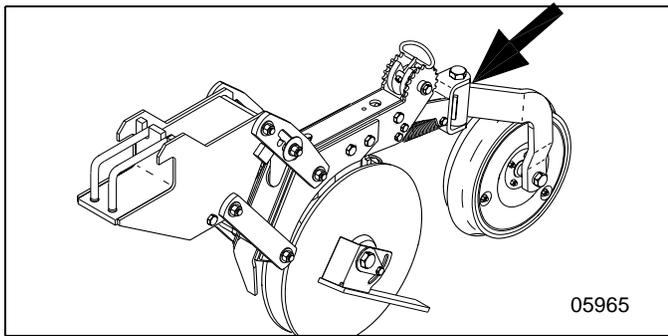
Lubrication Legend		Multipurpose Grease Lube		Multipurpose Oil Lube		50 Hours	Lubrication Interval



		50 Hours
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OPTIONAL HYDRAULIC ROW MARKER

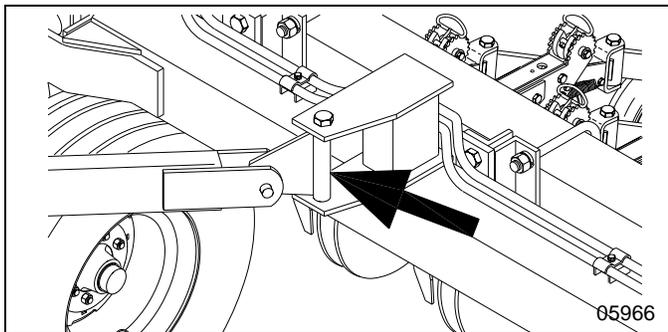
Lubrication: Multipurpose Grease



		50 Hours
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PRESS WHEEL SWIVEL

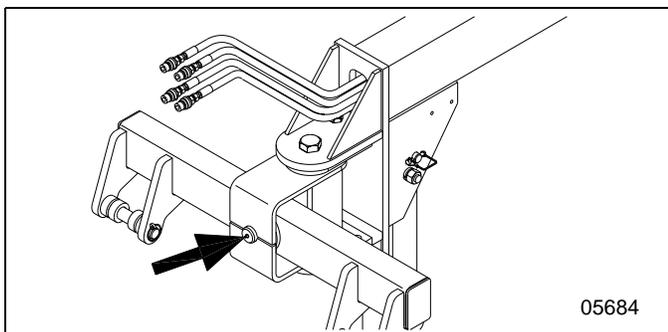
Lubrication: Multipurpose Grease



		50 Hours
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WING BRACE SWIVEL

Lubrication: Multipurpose Grease

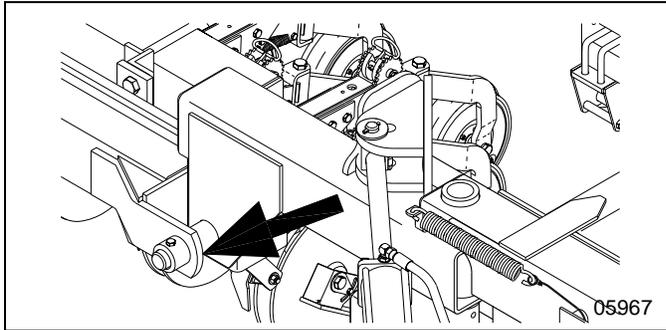


		50 Hours
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2-POINT HITCH

Lubrication: Multipurpose Grease

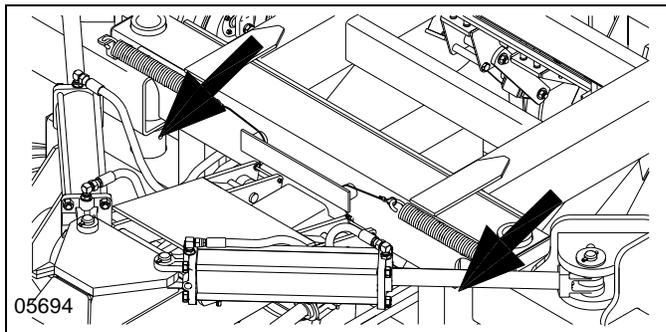
Lubrication Legend		Multipurpose Grease Lube		Multipurpose Oil Lube		50 Hours	Lubrication Interval



		50 Hours
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SHORT WING PIVOTS

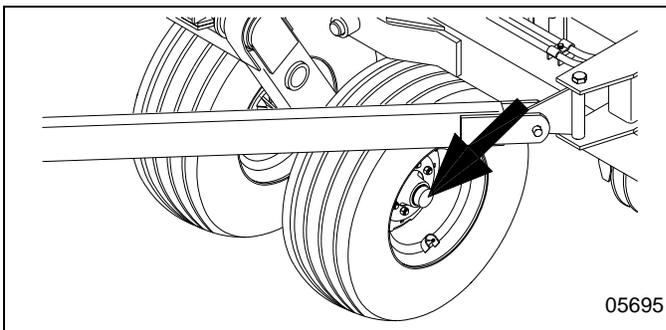
Lubrication: Multipurpose Grease



		50 Hours
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CENTRE FRAME PIVOTS

Lubrication: Multipurpose Grease



		Yearly
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**WHEEL BEARINGS
(PACK WHEEL BEARINGS)**

Lubrication: Multipurpose Grease

Wheel Bearings

The wheel hubs should be cleaned and repacked annually. This ensures that all contaminants are removed and provides a fresh supply of grease. The following procedure is necessary in order to properly install the triple lip seal. It is essential the seal lips are facing away from the hub if the contaminants are to be kept out.

1. Remove the dust cap, cotter pin, slotted nut and washer.
2. Remove the hub and clean the bearings and cavity. Replace any damaged or worn parts.
3. Pack the hubs with grease.
4. Install the seal on the spindle shaft. Do not try to place the hub on the spindle with the seal in the hub.
5. Replace the hubs with inner bearings in place.
6. Place the outer bearing, washer and slotted nut on the wheel spindle.
7. Adjust the bearings by tightening the slotted nut until there is a resistance to rotation. Loosen the slotted nut until the hub can be rotated freely by hand without end play.
8. Put the cotter pin through the spindle and slotted nut, and replace the dust cap
9. Slide the seal down the spindle, revolving it on the spindle so the seal lips will be facing away from the hub.
10. Install the seal in the hub as shown in Figure 39.

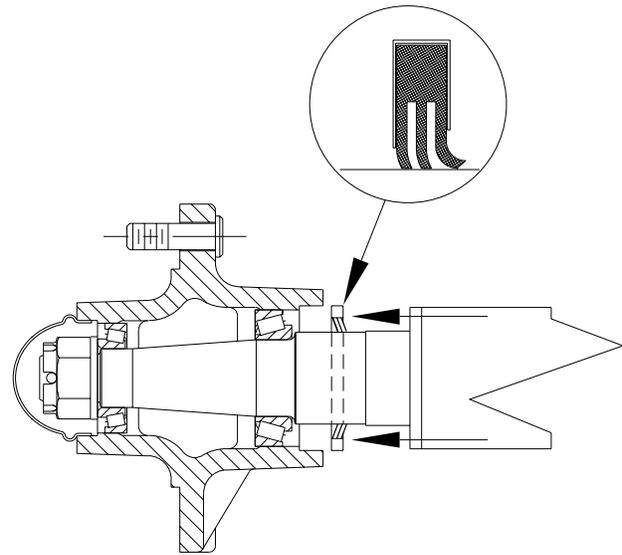
Storage

At The End Of The Planting Season

1. Clean the Xpress Air Drill thoroughly and inspect all parts for wear and breakage. Order replacement parts required now, so needless delays can be avoided at the beginning of the next planting season.
2. Remove any seed remaining in the hopper. Any remaining grain in the seeder units should be removed by rotating the seeder shaft.
3. Remove the rubber seed tubes and store inside.
4. Coat the double disc with oil and grease to prevent rusting.
5. Remove all drive chains and clean with diesel fuel. Oil thoroughly and store in a dust proof and moisture proof container.
6. Coat all sprockets with oil or grease to prevent rusting.

At The Beginning Of The Next Planting Season

1. Clean off any dirt or grease that may have accumulated while the Xpress Air Drill was stored. This will prevent any abrasive action that could cause excessive wear.
2. Install the rubber seed tubes.
3. Install all drive chains and lubricate.
4. Again inspect all nuts and bolts for tightness. Make sure all moving parts move freely and do not bind.
5. Take the time to read through the manual to refresh yourself with the safety information and the operating instructions. This time spent could prevent an injury to yourself and also prevent damage to the Xpress Air Drill.



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Figure 39
Installing the Seal in the Hub

Trouble Shooting

Table 1: Trouble Shooting

Symptom	Probable Cause	Possible Remedy
Planting too deep	Press wheel is adjusted too high	Lower the press wheel adjustment, see "Seeding Depth Adjustment" on page 48
	Excessive down pressure	Decrease the down pressure setting, see "Opener Adjustments" on page 49
	Seed bed is too loose	Use Hydraulic Depth Stops
	Xpress Air Drill is not level (Front to Back)	Adjust 3-point height on the Air Cart
Planting too shallow	Press wheel is adjusted too low	Raise the press wheel setting, see "Seeding Depth Adjustment" on page 48
	Insufficient down pressure	Increase the down pressure behind the tires, see "Opener Adjustments" on page 49
Uneven seeding depth	Press wheel depth is not properly adjusted	Adjust the press wheels, see "Seeding Depth Adjustment" on page 48
	Seeding shallow behind tractor tires	Increase down pressure behind tractor tires, see "Opener Adjustments" on page 49
Seed is bunching	Seed tubes are sagging	Shorten the seed tubes
	Not Maintaining the 3/4" - 1" measurement between the parallel link & the parallel link stop	Lower the Xpress Air Drill, refer to "Opener Adjustments" on page 49

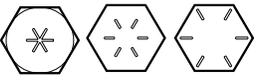
Appendix Section

Proper Bolt Use

When assembling this machine, it is important the proper bolts are used in each location and that each bolt is torqued correctly. Over torquing a bolt is one of the most frequent causes of bolt failure. When a bolt is over torqued, the stress on the bolt exceeds the elastic limit and places the material in a plastic condition. The bolt will then be permanently lengthened which lowers the effective tension and clamping force which may cause it to fail. During assembly, avoid using "cheater bars" as their use increases the possibility of over torquing a bolt.

SAE Fastener Torque Specifications

The torque specifications below are for UNC and UNF thread fasteners, plated or unplated, as received from the supplier. Fasteners can be dry or lubricated with normal motor oil. Specifications do not apply if graphite, moly-disulfide, or other extreme pressure lubricant is used.

SAE Grade Number	2				5				8*			
Bolt Head Identification (see note)												
Bolt Size Max.	Foot Pounds		Newton Meter		Foot Pounds		Newton Meter		Foot Pounds		Newton Meter	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1/4"	5	6	7	8	9	11	12	15	12	15	16	20
5/16"	10	12	14	16	17	20.5	23	28	24	29	33	39
3/8"	20	23	27	31	35	42	48	57	45	54	61	73
7/16"	30	35	41	47	54	64	73	87	70	84	95	114
1/2"	45	52	61	70	80	96	109	130	110	132	149	179
9/16"	65	75	88	102	110	132	149	179	160	192	217	260
5/8"	95	105	129	142	150	180	203	244	220	264	298	358
3/4"	150	185	203	251	270	324	366	439	380	456	515	618
7/8"	160	200	217	271	400	480	542	651	600	720	814	976
1"	250	300	339	406	580	696	787	944	900	1080	1220	1464
1-1/8"					800	880	1085	1193	1280	1440	1736	1953
1-1/4"					1120	1240	1519	1681	1820	2000	2468	2712
1-3/8"					1460	1680	1980	2278	2380	2720	3227	3688
1-1/2"					1940	2200	2631	2983	3160	3560	4285	4827
Note: Bolt Head Identification Marks As Per Grade. Manufacturing marks may vary.									* Thick Nuts Must Be Used With Grade-8 Bolts.			

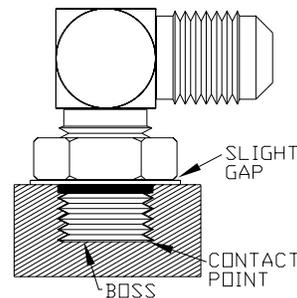
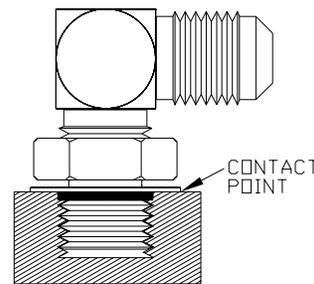
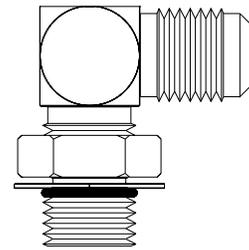
STANDARD TORQUE SPECIFICATIONS FOR HYDRAULIC TUBES AND FITTINGS

O-Ring Face Seal Fittings (Face Seal End)

Size	Tubing O.D.		Thread Size	Foot Pounds		Newton-Meters	
	Inches	Millimeters		Min.	Max.	Min.	Max.
4	1/4"	6.4	9/16"-20	10	12	14	16
6	3/8"	9.5	11/16"-16	18	20	24	27
8	1/2"	12.7	13/16"-16	32	35	43	47
10	5/8"	15.9	1"-14	46	50	60	68
12	3/4"	19.1	1-3/16"-12	65	70	90	95
14	7/8"	22.2	1-3/16"-12	65	70	90	95
16	1"	25.4	1-7/16"-12	92	100	125	135
20	1-1/4"	31.8	1-11/16"	125	140	170	190
24	1-1/2"	38.1	2"-12	150	165	200	225

O-RING BOSS PLUGS, ADJUSTABLE FITTING LOCK NUTS, JIC-37° SEATS

Size	Foot Pounds		Newton Meter	
	Min.	Max.	Min.	Max.
4	6	10	8	14
5	10	15	14	20
6	15	20	20	27
8	25	30	34	41
10	35	40	47	54
12	60	70	81	95
14	70	80	95	109
16	80	90	108	122
20	95	115	129	156
24	120	140	163	190



1. Lubricate the O-ring seal with a light coat of oil or petroleum jelly and install it into the groove of the fitting next to the metal back-up washer.

2. Install the fitting until the metal back-up washer contacts the face of the boss. This locates the maximum depth of the fitting.

Note: Do not over-tighten or distort the metal back-up washer.

3. Position the fitting by turning it out (counter-clockwise) to a maximum of one complete revolution and tighten the locknut to the recommended torque.

Note: In special applications, the fitting will contact the internal part of the straight threaded boss prior to the back-up washer.

TIRE INFLATION CHART		
Tire Size	Ply/Load Rating	Inflation Pressure (psi) (max.)
16.5 x 6.50 x 8	6 (C)	70 psi
20.5 x 8.00 x 10	4 (E)	90 psi
6.70 x 15	6 (C)	44 psi
7.60 x 15	6 (C)	40 psi
9.5L x 15	8 (D)	44 psi
9.5L x 15	12 (F)	64 psi
11L x 15	8 (D)	36 psi
11L x 15	12 (F)	52 psi
11L x 15 FI*	12 (F)	90 psi
11L x 15	18	76 psi
12.5L x 15	10 (E)	44 psi
12.5L x 15	12 (F)	52 psi
12.5L x 15 FI*	12 (F)	90 psi
12.5L x 15	16	70 psi
12.5 x 15*	20	90 psi
<i>* Use with special Morris heavy duty rim only.</i>		

WARNING

Serious injury or death may result from tire failure due to misapplication, improper inflation, overloading or exceeding the maximum speed.

1. Follow the tire manufacturer's instructions.
2. Check the tire pressure frequently for the proper inflation.

7180 AIR CART

Model Spacing	Xpress-30 7½"	Xpress-30 10"	Xpress-40 7½"	Xpress-40 10"
Transport Length (overall)	49' 6"	49' 6"	55' 6"	55' 6"
Transport Height (overall)	10' 9"	10' 9"	10' 9"	10' 9"
Transport Width (overall)	13' 10"	13' 10"	13' 10"	13' 10"
Auger	7"x17'	7"x17'	7"x17'	7"x17'
Est. Weight (combined)	21,696	20,223	26,910	24,946
Air Cart	5,200	5,200	5,200	5,200
Seeding Unit	16,496	15,023	21,710	19,746
Tank Capacity	180 bu.	180 bu.	180 bu.	180 bu.
Front tank	71	71	71	71
Rear tank	109	109	109	109

7240 AIR CART

Model Spacing	Xpress-30 7½"	Xpress-30 10"	Xpress-40 7½"	Xpress-40 10"
Transport Length (overall)	51' 4"	51' 4"	57' 4"	57' 4"
Transport Height (overall)	10' 9"	10' 9"	10' 9"	10' 9"
Transport Width (overall)	13' 10"	13' 10"	13' 10"	13' 10"
Auger	7"x20'	7"x20'	7"x20'	7"x20'
Est. Weight (combined)	23,321	21,848	28,535	26,571
Air Cart	6,825	6,825	6,825	6,825
Seeding Unit	16,496	15,023	21,710	19,746
Tank Capacity	240 bu.	240 bu.	240 bu.	240 bu.
Front tank	95	95	95	95
Rear tank	145	145	145	145