



**6000 STRIP-TILL EQUIPMENT
3-POINT MOUNTED UNITS
PULL-TYPE SYSTEM WITH TOOLBAR
AND FERTILIZER CART ASSEMBLY**

ASSEMBLY AND OPERATOR MANUAL

DO NOT USE OR OPERATE THIS EQUIPMENT UNTIL THIS MANUAL
HAS BEEN READ AND THOROUGHLY UNDERSTOOD

PART NUMBER 81006051 Rev. C

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INTRODUCTION

Congratulations on your purchase of a new Hiniker 6000 Strip-Till. Your selection is an indication of your awareness of the intense research, engineering, design and quality control that has produced your durable and dependable Strip-Till from Hiniker.

This manual is provided as set-up and assembly instructions, and as an aid to the operator in explaining settings and adjustments for all soil, residue and functional applications of the Hiniker Strip-Till. Also, its operational care and maintenance requirements. Careful application of the recommended procedures contained in this manual will assure you of many years of dependable, efficient operation.

Your Hiniker Strip-Till has been designed to accept additional attachments to broaden its scope of operation and make your job easier under unusual or adverse field conditions. These attachments are described in the attachment section of this manual and are available through your local Hiniker Dealer.

“Right hand” and “left hand” sides of your Strip-Till are determined by facing the direction that the Strip-Till travels while in use.

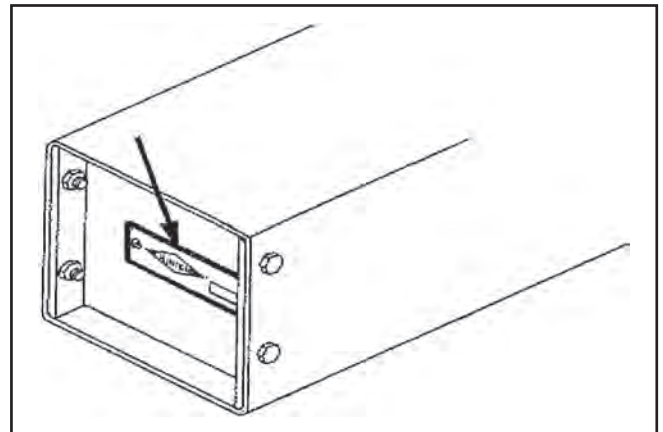
Always obtain original Hiniker service parts because substitute parts could adversely affect equipment performance and warranty.

A triplicate (3 copies) delivery report is to be filled out by your Hiniker Dealer when you accept this equipment. One copy is to be given to you. Do not accept this equipment until you are satisfied all items thereon have been checked, and you understand them.

Check that your dealer has forwarded the HINIKER delivery report copy, along with the machine serial number, because it helps maintain maximum service and warranty benefits. This does not put you on any mailing list and information is not available to others.

3-Point Mounted Strip-Till Toolbar

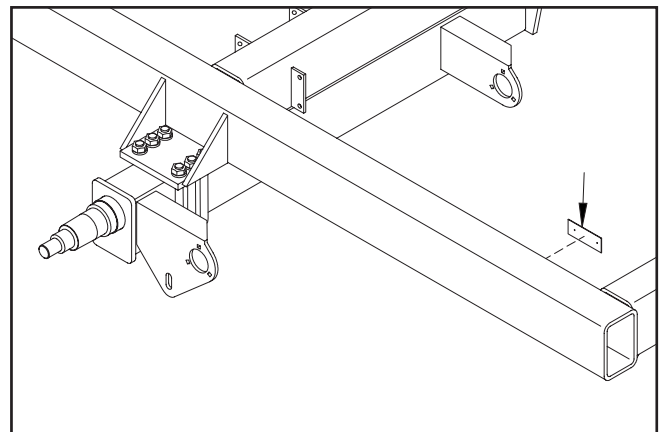
The serial number tag is located on the left rear inside of the fertilizer cart as indicated.



DWG NO. 162

Fertilizer Cart/Lift Assist Pull Type Hitch

The serial number tag is located on the left rear inside of the fertilizer cart as indicated.



DWG NO. 6422

Record the following information for later reference when obtaining service parts:

Purchase Date _____

Purchaser's Name _____

Dealer's Name _____

Machine Serial No. _____

SAFETY SUGGESTIONS



WARNING: Your safety and the safety of those around you depend upon your using care and good judgement in the operation of this equipment. Know the positions and functions of all controls before attempting to operate.

All equipment has limitations. Understand the speed, braking, steering, stability, and load characteristics of the machine before starting to operate. Read your OPERATOR'S MANUAL!

The following are general safety comments that apply to all equipment. Review them often as safety reminders.

- Don't be in a hurry.
- Check all controls and operating functions of the machine in a safe area before starting to work.
- Never allow anyone around machinery when you are performing operating functions.
- When service demands working on, under, or around, tillage implement, proper precautions should be taken to stabilize or secure implement. (Lowering stands, blocking of implement, etc.)
- When transporting the machine, ensure all warning devices, such as, SMV sign and reflective devices are in place, clean, and clearly visible.
- Watch where you are going. Note all hazards and obstructions such as ditches, overhead electrical wires, narrow gates, etc. when transporting and/or operating the machine. Refer to page 4 of this manual for transport height and width specifications.
- Never unhook from folding model Strip-Till with the wing section in the up transport position. Lower wings to ground first then unhook.
- Never ride or permit others to ride on tractor drawbar or on machine; nor allow anyone other than yourself on the tractor while in operation.
- Reduce tractor speed when transporting over uneven or rough terrain.
- When transporting down steep hills or slopes, shift tractor into lower gear.
- Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin causing serious personal injury. Before connecting lines, be sure to relieve all pressures in the system by moving hydraulic control levers in both directions before attaching couplers.
- Before disconnecting lines, be sure to relieve all pressures to the system.
- Be sure all connections are tight and that lines, pipes, and hoses are not damaged or worn.
- A very small leak from a hydraulic line, pipe, hose, or fitting can be almost invisible. Use a piece of cardboard or wood when checking for suspected leaks rather than your hands.
- If injury is received from escaping fluid, see a doctor at once, as serious reaction or infection can result if proper medical treatment is not received immediately.
- Never operate wing lift cylinders on folding toolbar models without (4) restrictor fittings, one at each end of lift cylinder.

SPECIFICATIONS

STANDARD EQUIPMENT

3 Point Mounted Strip Till Toolbar Only

Set Back Bracket Required Around Hitches And Toolbar Hinge

- 810-002-235 6 Row 30 Rigid Toolbar*
 - 810-002-237 8 Row 30 Rigid Toolbar*
 - 81004427 8 Row 36-38 Folding Toolbar*
- *Common Mount Box Required

Dedicated 3-Point Mounted Strip Till Toolbar Only

Set Back Bracket Required Around Hitches

- 81005603 8 Row 30 Fold Toolbar
- 81005604 12 Row 30 Fold Toolbar

Dedicated Strip Till Toolbar With Trail Hitch, Fertilizer Cart Liquid Or Single Granular Tank

No Set Back Bracket Required

- 81005339 12 Row 22 Rigid Toolbar 1000 Gal Liquid Tank
- 81006074 12 Row 22 Rigid Toolbar 5 Ton Granular Tank 1 1/2" Hose
- 81005341 12 Row 30 Folding Toolbar 1000 Gal Liquid Tank
- 81006075 12 Row 30 Fold Toolbar 5 Ton Granular Tank 1 1/2" Hose
- 81005356 16 Row 22 Fold Toolbar 1000 Gal Liquid Tank
- 81006077 16 Row 22 Fold Toolbar 5 Ton Granular Tank 1 1/2" Hose
- 81005345 16 Row 30 Fold Toolbar 1000 Gal Liquid Tank
- 81006078 16 Row 30 Fold Toolbar 5 Ton Granular Tank 1 1/2" Hose

Dedicated Strip Till Toolbar With Trail Hitch, Fertilizer Cart, (40/60 Split) Granular Tank

No Set Back Bracket Required

- 81006076 12 Row 30 Fold Toolbar 5 Ton Granular Tank 2" Hose
- 81006079 16 Row 30 Fold Toolbar 5 Ton Granular Tank 2" Hose

Granular Tank Metering Drive

- 81006080 Mechanical Ground Drive Single Tank
- 81006081 Hydraulic Variable Drive Single Tank
- 81006082 Hydraulic Variable Drive Split Tank

ALL TOOLBAR MODELS:

- One Pair Of Parking Stands.
- 3-Point Mounted Strip-Till Toolbar Fits Category II And III.
- Trail hitch Strip-Till Toolbar Fits Category IV. **Maximum Drawpin Size 2.0" (Damage to Equipment Will Occur If Larger).**

TILLAGE UNIT WITH BASIC STRIP-TILL:

- Two 4 x 16 Inch Oscillating Rubber Gauge Wheels Per Row Unit With Lever And Pin Height Adjustment.
- Cutting/Stabilizing Coulters With Lever And Pin Depth Adjustment.
- High Strength Steel Shanks With Hardened Replaceable Point. Pair Of Berming Discs.
- Weight Transfer System With Variable Adjustment Up To 750 Lbs/Row.

The Hiniker Strip-Till is 3-point mounted and trail hitch with cart is available in five rigid models and eleven folding models. It is recommended that a tractor of the following minimum size be used on the appropriate size Strip-Till:

STRIP-TILL TYPE AND SIZE	RECOMMENDED DRAWBAR HORSEPOWER
3-Point Hitch 6 Row	120
3-Point Hitch, Trail Hitch And Cart 8 Row	160
3-Point Hitch 12 Row	240
Trail Hitch And Cart 12 Row	240+
Trail Hitch And Cart 16 Row	320+

4 Specifications And Lubrication

Toolbar Number And Type	Number Of Rows	Row Spacing	Transport Width	Transport Height	Tank Type Capacity	Approximate Weight Includes Row Units & Set Back Brackets
3-Point Mounted Strip-Till Toolbar Only * <input type="checkbox"/>						
810-002-235 Rigid	6	30 In.	16 Ft. 6 In.	6 Ft. 6 In.	None	3288 Lbs.
810-002-237 Rigid	8	30 In.	21 Ft. 6 In.	6 Ft. 6 In.	None	4370 Lbs.
81004427 Fold	8	36 & 38 In.	15 Ft. 8 In.	10 Ft. 9 In.	None	5234 Lbs.
Dedicated 3-Point Mounted Strip-Till Toolbar Only <input type="checkbox"/>						
81005603 Fold	8	30 In.	9 Ft. 6 In.	10 Ft. 5 In.	None	5816 Lbs.
81005604 Fold	12	30 In.	14 Ft. 6 In.	11 Ft.	None	6882 Lbs.
Dedicated Strip-Till Toolbar With Trail Hitch, Fertilizer Cart Liquid Or Granular Tank <input checked="" type="checkbox"/>						
81005339 Rigid	12	22 In.	21 Ft. 6 In.	8 Ft. 8 In.	1000 G. Liquid	
81006074 Rigid	12	22 In.	21 Ft. 6 In.	9 Ft. 8 In.	5 Ton Granular	8349 Lbs.
81005341 Fold	12	30 In.	14 Ft. 6 In.	11 Ft. 6 In.	1000 G. Liquid	
81006075 Fold	12	30 In.	14 Ft. 6 In.	11 Ft. 6 In.	5 Ton Granular	9080 Lbs.
81005356 Fold	16	22 In.	18 Ft. 6 In.	11 Ft. 1 In.	1000 G. Liquid	
81006077 Fold	16	22 In.	18 Ft. 6 In.	11 Ft. 1 In.	5 Ton Granular	11741 Lbs.
81005345 Fold	16	30 In.	19 Ft. 6 In.	12 Ft. 2 In.	1000 G. Liquid	
81006078 Fold	16	30 In.	19 Ft. 6 In.	12 Ft. 2 In.	5 Ton Granular	11806 Lbs.
Dedicated Strip-Till Toolbar With Trail Hitch, Fertilizer Cart 40/60 Split Granular Tank						
81006076 Fold	12	30 In.	14 Ft. 6 In.	11 Ft. 6 In.	5 Ton Granular	
81006079 Fold	16	30 In.	19 Ft. 6 In.	12 Ft. 2 In.	5 Ton Granular	

* Common Mount Box Required

Set Back Bracket Required

Metering Drives Not Included

LUBRICATION



CAUTION: Never clean, lubricate, inspect, repair, or adjust your machine, nor allow anyone else to, while it is in operation.

Lubrication of moving parts and wear surfaces is essential to the extended service life of those parts. Inspect your machine frequently to ensure that all parts are working smoothly in addition to inspection and lubrication at required intervals as indicated.

The use of sealed ball bearings and oil impregnated bushings throughout the Strip-Till limits the grease fittings requiring periodic lubrication.

Following are the fitting locations and hourly intervals requiring a high quality SAE multi-purpose grease.

20 HOURS

- Lift links between toolbar and fertilizer cart at each pivot. No restriction of grease volume on single fitting.

200 HOURS

- FOLDING TOOLBAR HINGE - No restriction of grease volume in two hinge fitting.

PREPARING FOR FIELD USE

RECOMMENDED TORQUE VALUES

The torque values given in Table 1 are valid for standard zinc coated and lubricated fasteners assembled in rigid joints.

Fasteners which are waxed or phosphate coated or cadmium coated or specially lubricated should be torqued to lubricate torque values below.

A \pm 20 percent tolerance is to be used when a single value torque is specified.

PREPARING STRIP-TILL

Prior to the operation of your new Strip-Till or one which has been stored, inspect all hardware and verify proper torque on all bolts and nuts in accordance with the recommended torque specifications listed on page 5.

Check that the complete air fertilizer system, the hydraulic fan and all fertilizer hoses are free of debris.

TABLE 1 - RECOMMENDED TORQUE VALUES FOR INCH FASTENERS
(ZINC PLATING & LUBRICATED)**

Nominal Size	SAE 2 74 000 psi Min Tensile lb - ft		SAE 5 120 000 psi Min Tensile lb - ft		SAE 8 150 000 psi Min Tensile lb - ft	
	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated
1/4-20	6	4	8	6	12	9
1/4-28	6	5	10	7	14	10
5/16-18	11	8	17	13	25	18
5/16-24	12	9	19	14	25	20
3/8-16	20	15	30	23	45	35
3/8-24	23	17	35	25	50	35
7/16-14	30	24	50	35	70	55
7/16-20	35	25	55	40	80	60
1/2-13	50	35	75	55	110	80
1/2-20	55	40	90	65	120	90
9/16-12	70	55	110	80	150	110
9/16-18	80	60	120	90	170	130
5/8-11	100	75	150	110	220	170
5/8-18	110	85	170	130	240	180
3/4-10	175	130	260	200	380	280
3/4-16	195	145	300	220	420	320
7/8-9	165	125	430	320	600	460
7/8-14	185	140	470	350	660	500
1-8	250	190	640	480	900	680
1-12	270	200	700	500	1000	740
1 1/8-7	350	270	800	600	1280	960
1 1/8-12	400	300	880	660	1440	1080
1 1/4-7	500	380	1120	840	1820	1360
1 1/4-12	550	420	1240	920	2000	1500
1 3/8-6	660	490	1460	1100	2380	1780
1 3/8-12	740	560	1680	1260	2720	2040
1 1/2-6	870	650	1940	1460	3160	2360
1 1/2-12	980	730	2200	1640	3560	2660

** MACHINE DESIGN FASTENER AND JOINT REFERENCE ISSUE.



CAUTION: Loose bolts can cause elongation of holes and part failures resulting in dangerous operating conditions and equipment breakdown. Check all bolts and nuts periodically during equipment operation and keep them tightened to torques specified. When bolt replacement becomes necessary, replace worn bolt with equal SAE grade number bolts.

LOOK FOR SUPPLEMENTAL INFORMATION

Occasionally new or revised information will become available after the operator's manual is printed. To get this up-to-date information to you, supplements are prepared and supplied to the field in the operator's manual package.

Supplements are usually supplied in the form of instruction sheets.

Before your initial review of the operator's manual, look through the operator's manual package to see if any supplemental information has been provided. If you find any, review this information to determine which operating procedures have been changed by the supplement. Pay close attention to **"DANGER"**, **"WARNING"**, **"CAUTION"**, and **"IMPORTANT"** statements as they address your safety, the safety of others, and the safe operation of the machine.

Operator's manuals are revised periodically, at which time the supplement is incorporated directly into the operator's manual, eliminating the need for the supplement.

TRACTOR PREPARATION 3-POINT MOUNTED STRIP-TILL

For complete tractor operating instructions and use of 3-point hitch implements, refer to your tractor operator's manual.

Place tractor on level surface and check tire inflation to ensure equal tire pressure. Lower draft arms to their lowest position and adjust lift links so that both draft arms are the same distance off the ground as measured from the draft arm sockets.

Reference tractor operator's manual for proper adjustment of draft arms and center link. If a quick hitch coupler is to be used, install it to the 3-point hitch at this time in accordance with the tractor operator's manual.

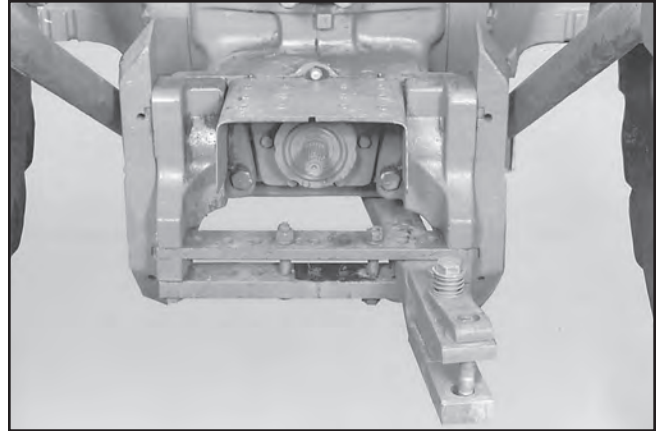


PHOTO NO. 917



CAUTION: The tractor sway blocks should be positioned, as shown, to prevent too much sway whether the Strip-Till is in working position or in transport position.

There should be 1/2 inch to 3/4 inch of spacing between the lower lift arms on the tractor and the sway blocks. This will allow the Strip-Till to follow contours, terraces, etc. Some model tractors use different methods to secure lift arms and must be set to allow equivalent movement. If position of the Strip-Till hitch brackets permit either too much or too little movement, they must be moved either in or out on the toolbar.

HITCH PREPARATION 3-POINT MOUNTED STRIP-TILL

The toolbar hitch is designed to accommodate both Category II and Category III tractor hitches. It may also be used with a quick hitch.

NOTE: If the tractor will not lift the Strip-Till high enough for transport or turning, the hitch pins may have to be placed in a lower set of holes, and adjust tractors lower lift arms to the highest lift position.



CAUTION: After attaching 3-Point Mounted Strip-Till to tractor, check front end stability. Tractor front end stability is necessary for safe and efficient operation. Therefore, it is important that the proper amount of weight be installed on the front of the tractor, as recommended in your tractors operator's manual.

HITCH PREPARATION STRIP-TILL TOOLBAR WITH TRAIL HITCH AND FERTILIZER CART

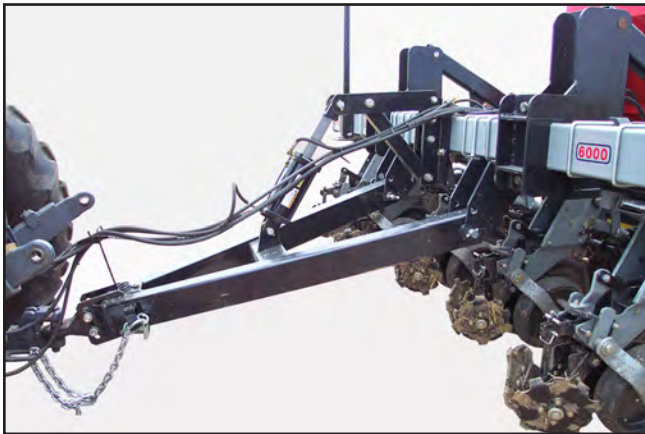


PHOTO NO. DCP0501

IMPORTANT: The trail cast hitch is designed for category IV drawn hitch standards. The maximum drawpin size is 2 inches. If larger pin is used, damage to equipment will occur and safety will be compromised. The hitch safety chain must always be used when pulling Strip-Till toolbar and fertilizer cart.

TRACTOR HYDRAULIC SETTINGS 3-POINT MOUNTED STRIP-TILL

Most modern tractors have a POSITION/DRAFT control which will lift the hitch as draft increases when in the draft mode. This setting could decrease penetration of the Strip-Till units, so be sure the POSITION setting is used.

The rocker arm (three point) lever should be placed in full collapse or down position when the Strip-Till is in operation.

TRACTOR HYDRAULIC SETTINGS STRIP TILL TOOLBAR WITH TRAIL HITCH WITH GRANULAR FERTILIZER CART.

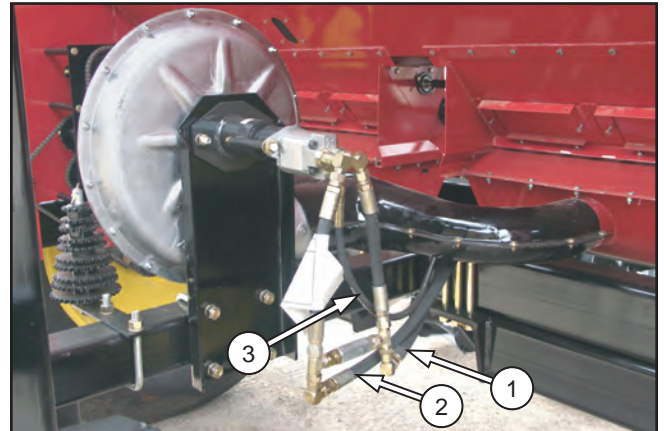


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IMPORTANT: HYDRAULIC CONNECTION RECOMMENDATIONS

1. Set tractor hydraulic flow control to minimum before connecting hydraulic lines.
2. Connect both 1/2 hydraulic hoses to the tractor hydraulic couplers so the pump operates with the control lever in the lower/retract position. The pump must be turned off in the forward "float" position.
3. The 1/4 case drain line must return to zero pressure return port, returning oil directly to the oil reservoir.
4. Refer to tractor operator's manual for proper return oil port for the motor and additional operating instructions of starting motor up and turning motor off.

OPERATION PROCEDURES AND ADJUSTMENTS

ADJUSTMENT PHOTO

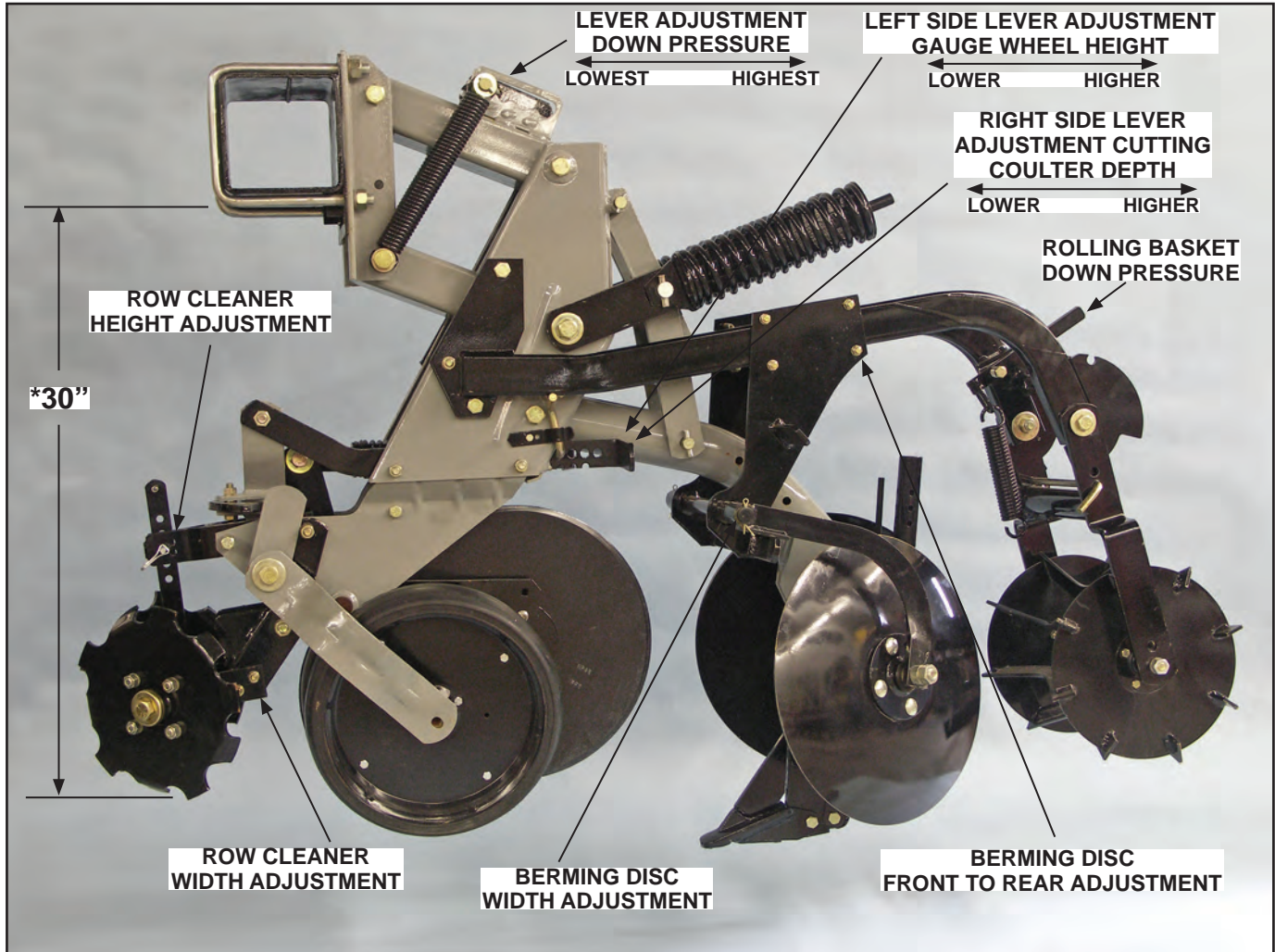


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NOTE: REFERENCE ADJUSTMENT PHOTO FOR ALL OPERATION PROCEDURES AND ADJUSTMENTS.

* The underside of toolbar to ground line dimension should be 30 inches in field operation. Whether it is a 3-point hitch mounted Strip-Till toolbar, or a pull type drawn hitch and cart Strip-Till toolbar arrangement.

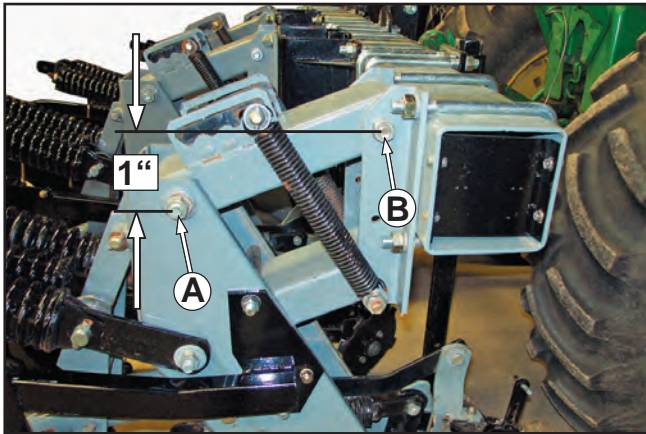


PHOTO NO. DCP2193A

TOOLBAR

It is critical that the parallel linkages of the individual gangs will be with rear (Arrow A) a little below front (Arrow B) in field operation approximately 1 inch. This will permit 9" of travel (4 1/2" up and 4 1/2" down) and maintain uniform ground penetration on irregular surfaces. The down pressure springs on each row unit will "borrow" weight from the others if that individual gang encounters harder ground, heavier residue, etc., and prevent riding out or plugging on that row. Usually the gangs following the tractor wheels will require increased down pressure.

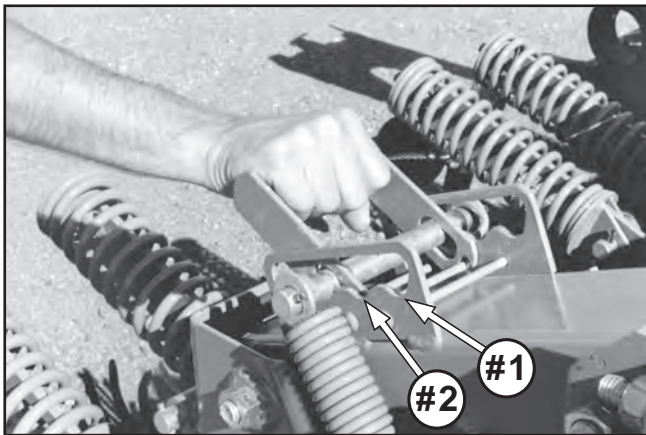


PHOTO NO. 3266B

DOWN PRESSURE LEVER

Always lift toolbar up to make down pressure adjustment that will reduce spring tension, to determine the right amount of down pressure. In field operations always maintain the parallel linkages to be lower at the rear approximately (1 inch). Most common down pressure setting notch #1 and #2.

If the gauge wheels sink into conventionally worked or other loose soils, the down pressure setting should be lessened and the weight of the toolbar carried on the tractor.

DEPTH CONTROL

There are four adjustments, three on the Strip-Till unit gauge wheel setting, cutting coulter setting, parallel linkage position with it's down pressure in working operation position. And the most important setting in carrying the toolbar at the correct height in working operation.



PHOTO NO. DCP2404A

GAUGE WHEEL LEVER

The lower left lever adjusts the gauge wheel depth by positioning the pivoting rocker arm which in turn stops both gauge wheel arms at the desired depth. With the rearmost hole being #1. INITIAL recommended settings are:

- HOLE #6 - Is the recommended initial hole to start. The soil type and soil condition will change this position.

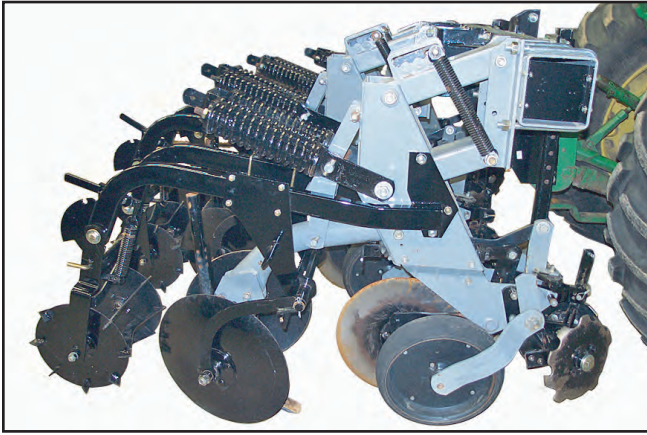


PHOTO NO. DCP2190

CUTTING COULTER

The cutting coulter serves two functions, cutting residue ahead of the shank and providing lateral stability. Never set the coulter deeper than that depth necessary to cut the residue and prevent plugging. If coulter is set too deep in wet soil it will bring up large clods of soil and be difficult to build good berm. Optional 81004118 rotary colter scraper improves the removal of soil see page 39.

Most competitive Strip-Till units are difficult to set in varying soil types because the coulter set deep enough to sever the residue in the soft moist soil areas, rides the unit out of the ground in the harder soil conditions. The 6000ST employs a preset spring feature to avoid this problem. Set the coulter depth to sufficiently cut the residue in the softest areas of the field and the spring will compress in the harder soil areas. This permits the coulter to run at a more shallow depth without riding the tillage unit out of the ground.

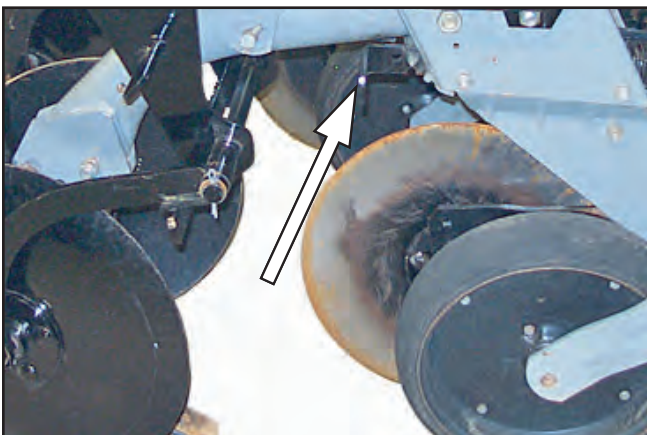


PHOTO NO. DCP2190B

The lowest right lever adjusts the coulter depth. With the rear most hole being #1, use hole #3 as the initial setting. The soil type and soil condition will change this position.

When coulters wear to less than the initial 18" diameter, a deeper lever setting will be required. If coulters are picking up mud and/or plugging the area between the wheels, raise the coulter.

TOOLBAR HEIGHT

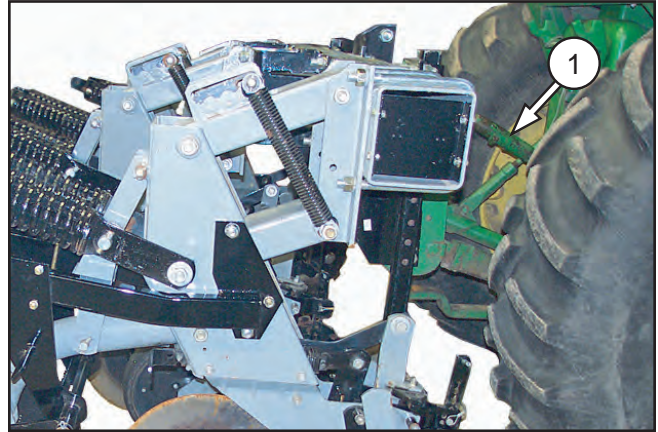
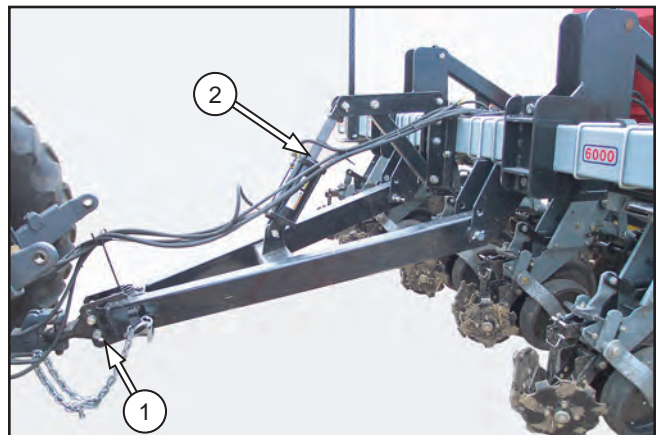


PHOTO NO. DCP2190C

TRACTOR UPPER LINK (THREE POINT HITCH)

The toolbar should be carried having a 30 inch dimension from underside of the toolbar to the ground in field operation. The toolbar should be level with the ground. The upper link (Arrow 1) will be adjusted to maintain that position.



DWG NO. DCP0501B

TRAIL HITCH AND FERTILIZER CART

The toolbar should be carried with a 30 inch dimension from underside of the toolbar to the ground. In field operation the cast hitch (Arrow 1) will be adjusted to fit tractor drawbar height. Cylinder stop collars (Arrow 2) can be used in some soil conditions. Stop collars are not furnished by Hiniker Company.

Tillage Unit Adjustment And Point Wear Caution

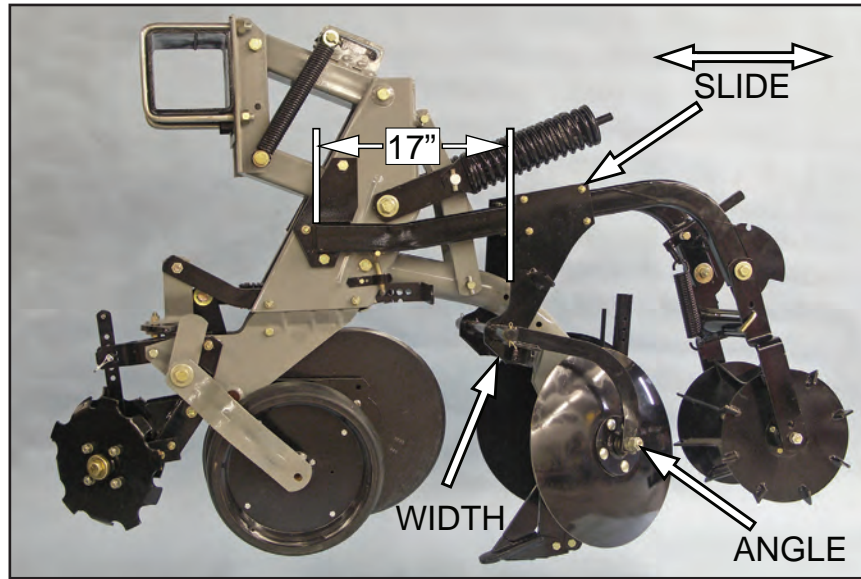
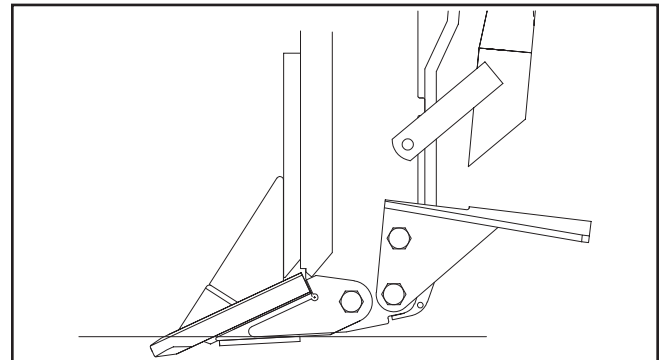


PHOTO NO. PICT0001XB

Adjustment: Berm disc support bracket will have initial setting of 17" from front of tube. It can be adjusted front to rear, to hold more soil for berm.

The berming disc support arm will adjust in width, in or out by changing spacer location. This will change berm width.

The combination of all the berming disc adjustments can vary the width and height of berm.



DWG. NO. 6548

Caution: Do not wear point beyond the line shown in drawing. Damage to shank will occur.

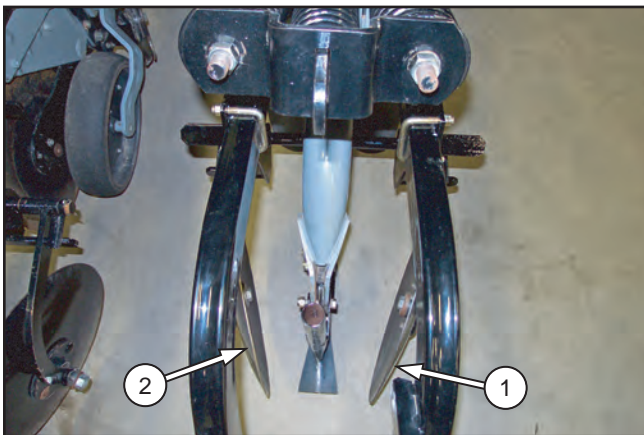


PHOTO NO. DCP2250A

Note: The position of the right and left disc (Arrow 1 & 2). The discs are always closer at the rear, too tight at the rear will cause it to plug.

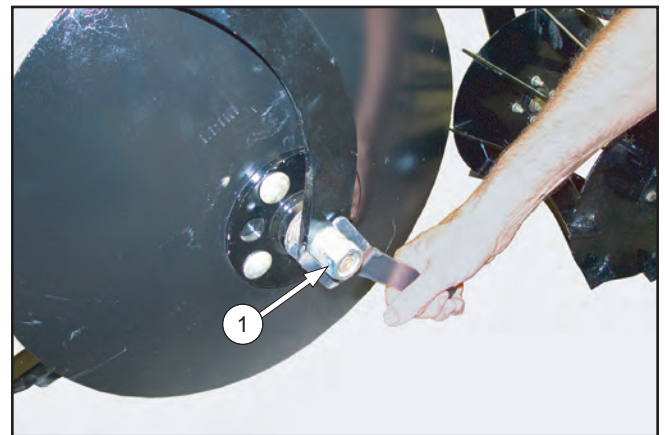


PHOTO NO. DCP0421A

The angle of the discs can be changed by loosening 3/4 hex nut (Arrow 1) then using the 81005438 wrench. Turn it to the desired angle based on berm size required. Retighten 3/4 hex lock nut (Arrow 1).

Adjustable Row Cleaner

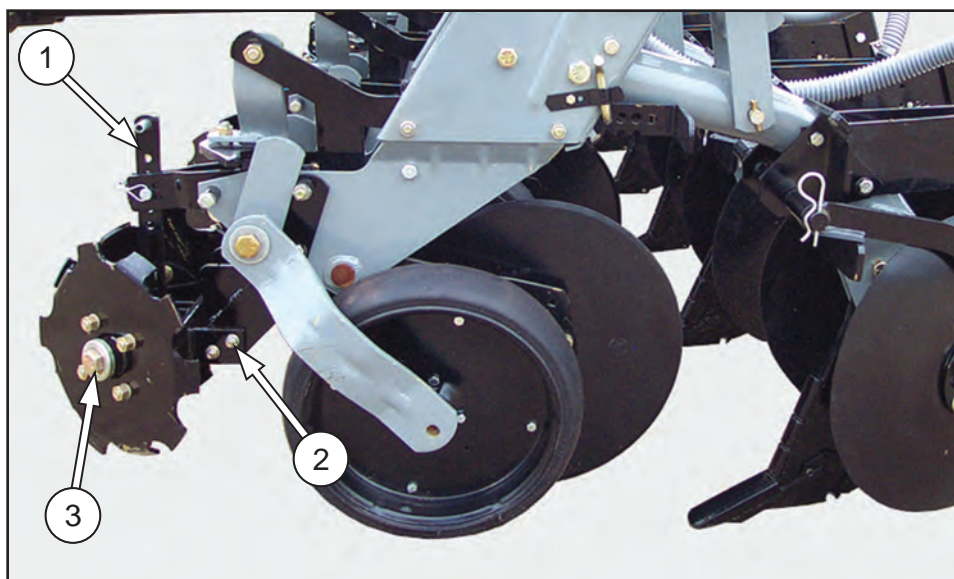


PHOTO NO. DCP0458B

Adjustment: The height position on the pull strap (Arrow 1) will be determined in the field, in working position. The slot in the pull strap will allow the row cleaner to float in firm ground, and will carry the row cleaner in soft ground. Both discs should just touch the top of the ground.

The angle of cleaning disc assembly can be changed at (Arrow 2). Changing the angle will adjust the width of the residue cleaned. One disc assembly (Arrow 3) can be installed in front of the others. Always balance out the number of right and left hand row units when one disc is moved forward



Strip-Till In Soybean Ground PHOTO NO. BL036



Strip-Till In Corn Ground PHOTO NO. BL003

Recommended Row Cleaner Settings

In soybean ground, initial pull strap (Arrow 1) setting will be 4th hole from the top. The angle (Arrow 2) setting to be at the bottom of slot, so the row cleaner will remove the residue and float over the ground with out removing soil.

In corn ground, run in between old corn rows. Initial pull straps (Arrow 1) setting will be 4th hole from the top. The angle (Arrow 2) setting to be in the middle of slot, as the amount of residue increases or decreases the angle will change accordingly.

Remove enough residue so the Strip-Till shank can run, but do not remove soil.

Rolling Basket

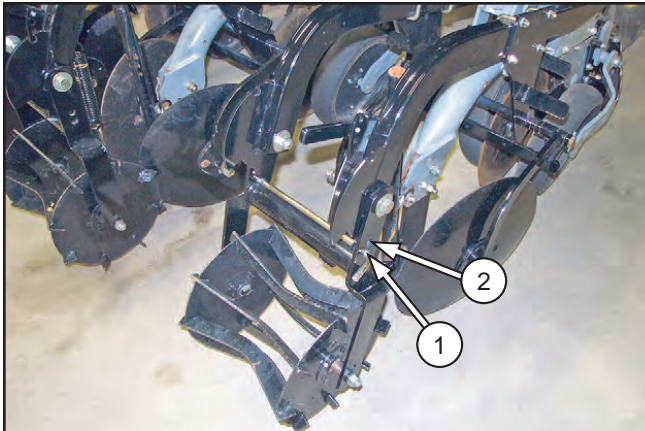


PHOTO NO. DCP2197B

Adjustment: In the field working position of locking pin use bottom hole (Arrow 1) for all rows. The second hole (Arrow 2) is only used on the four rows at the center when a trail hitch fertilizer cart is used. That is the stored position for those four rows.

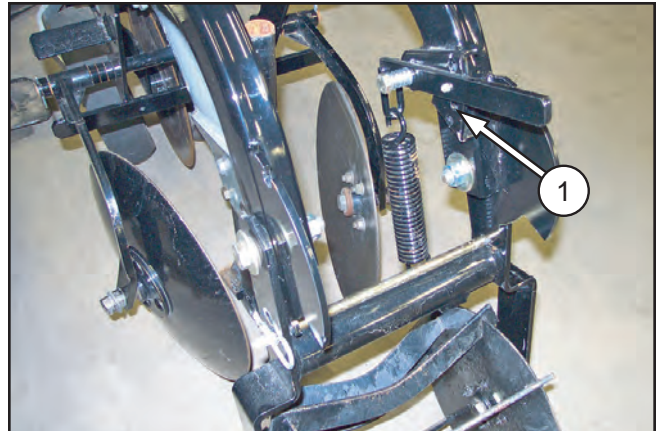


PHOTO NO. DCP2205C

There are four tension settings (Arrow 1). The setting will vary depending on how much of the soil is broken up in the berm.

Note: For installation of rolling basket lock on folding toolbars with granular fertilizer hopper see page 38 and 39.

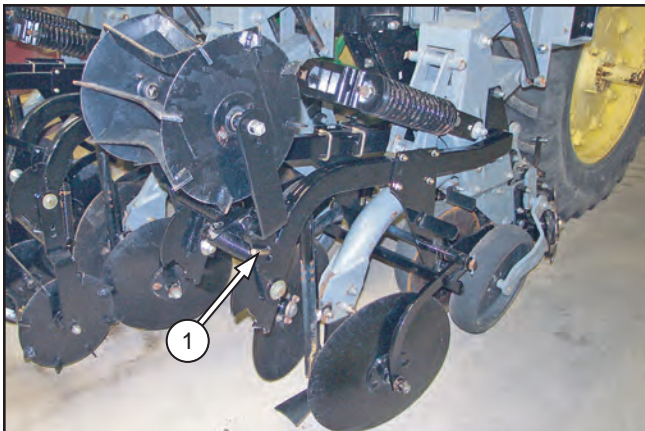


PHOTO NO. DCP2209A

All other rows will store. First remove all spring tension, then swing rolling basket arm up and install locking pin (Arrow 1) in the two notches at top.

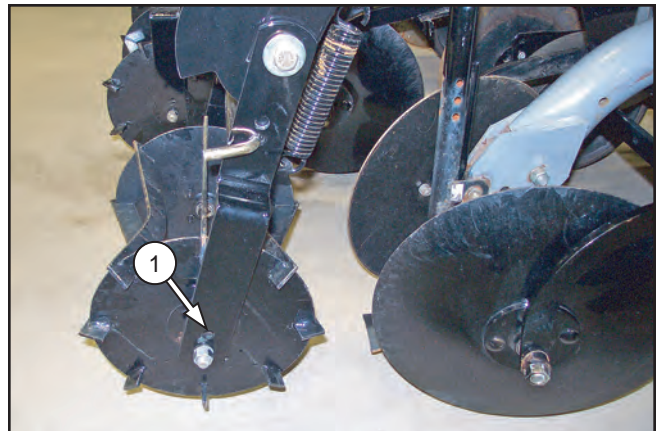


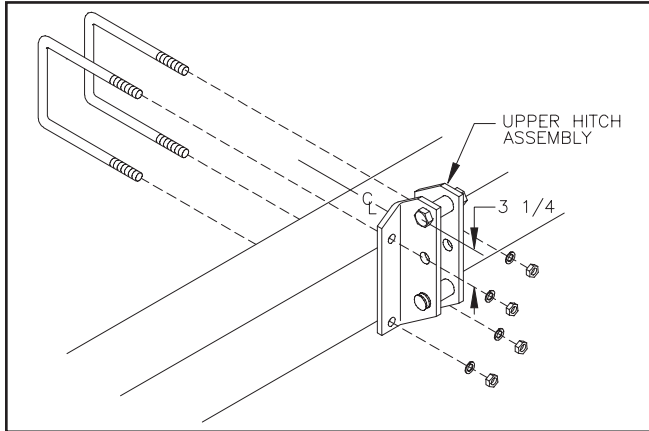
PHOTO NO. DCP2200A

To increase the vertical height of the rolling basket in the field working position, it can be moved to the upper holes (Arrow 1). It will provide additional clearance for higher berm.

Assembly Of Toolbar And Strip-Till Row Unit

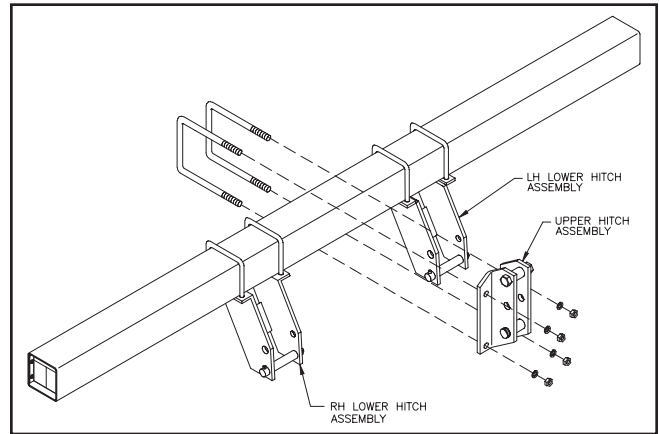
3-Point Mounted Strip-Till Toolbar

Step 1A: Support toolbar on stands approximately 44 inches high. Mark the center of the 7 inch square toolbar. Note: For folding toolbar see page 26 Step 1C.



DWG. NO. 6423

Step 2A: Install one upper 3-Point hitch on the front side of toolbar on center making sure the hitch extends above the toolbar. **Note:** 3 3/4" dimensions.



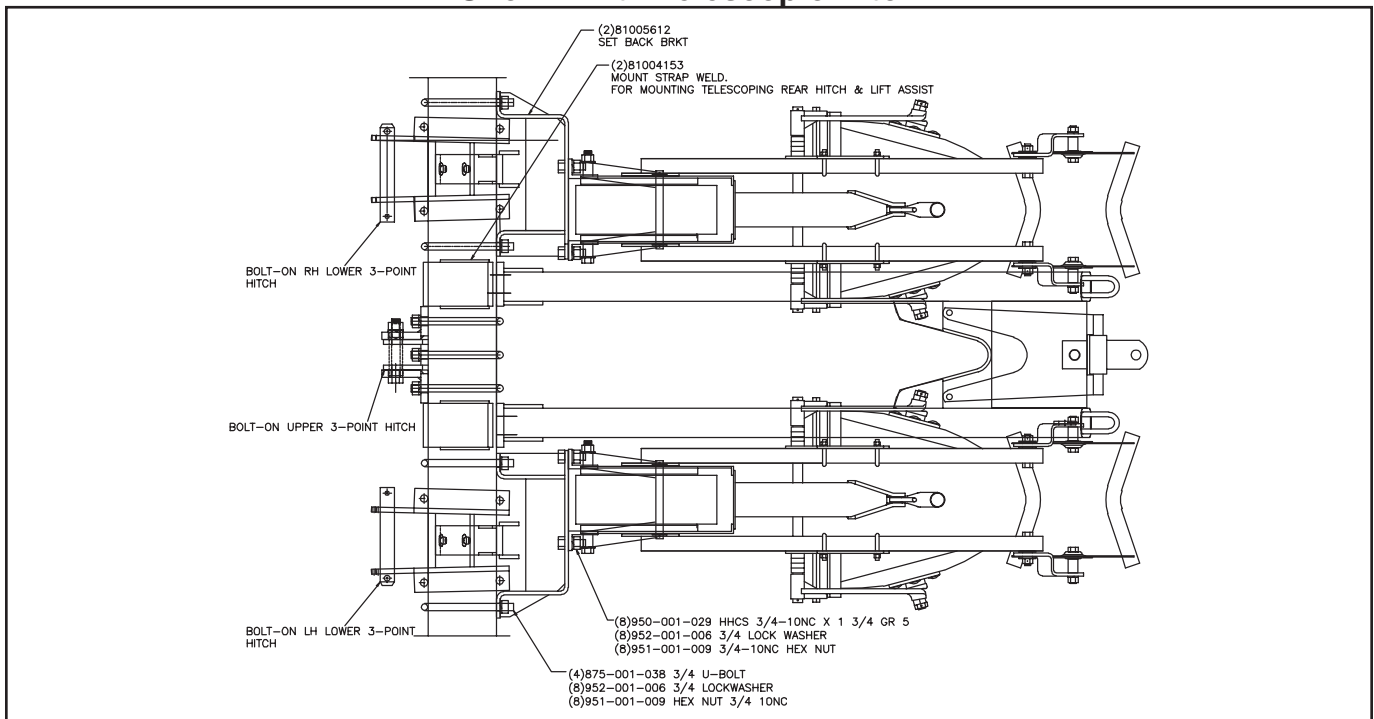
DWG. NO. 6424

Step 3A: Rigid toolbar install two lower three point hitches to bottom of toolbar using 3/4 inch U-bolts. Reference assembly diagrams for locating dimensions. Three point hitch will adapt to Category II or III tractors with and without quick hitches by changing positions of hitch pins.

Step 4A: Install setback brackets required for each model and size of toolbar.

81005607 Row Unit Setback Bracket For 30" Rows

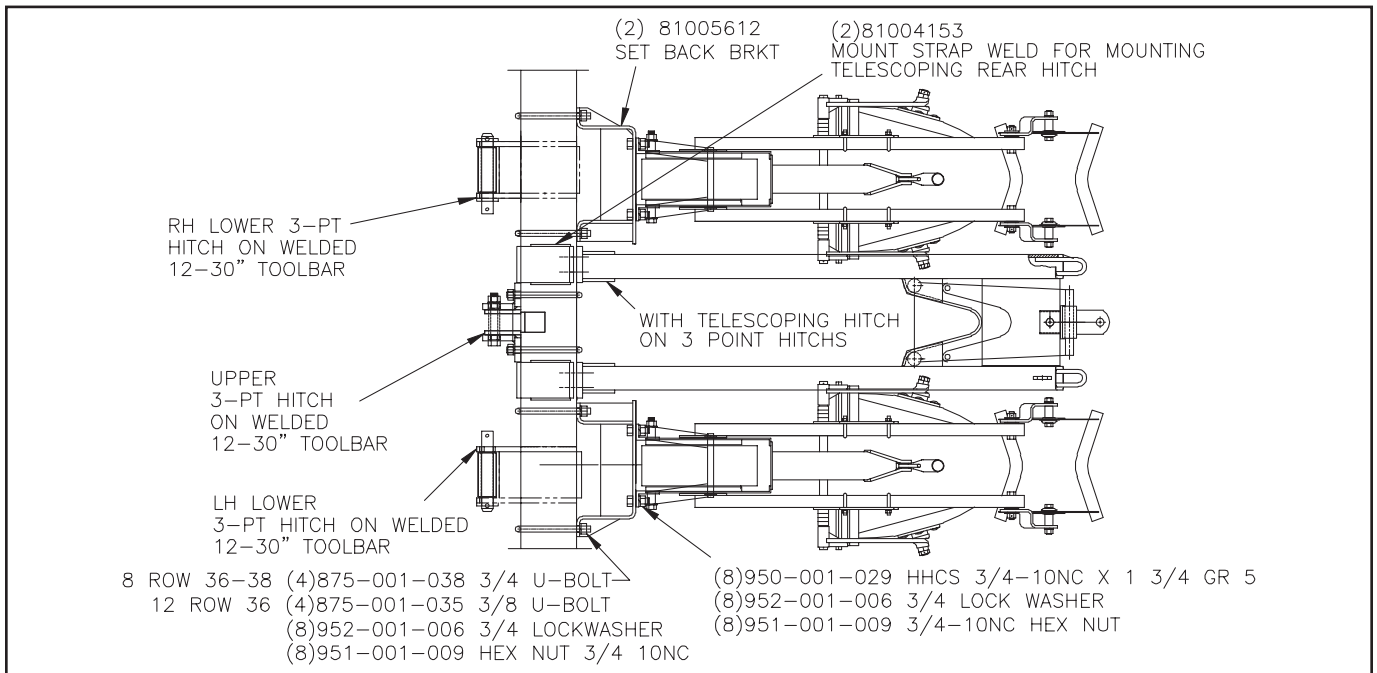
For 3-Point Mounted 6 And 8 Row 30 Rigid Toolbar / 8 And 12 Row 30 Folding Toolbar Shown With Telescopic Hitch



DWG. NO. 6425

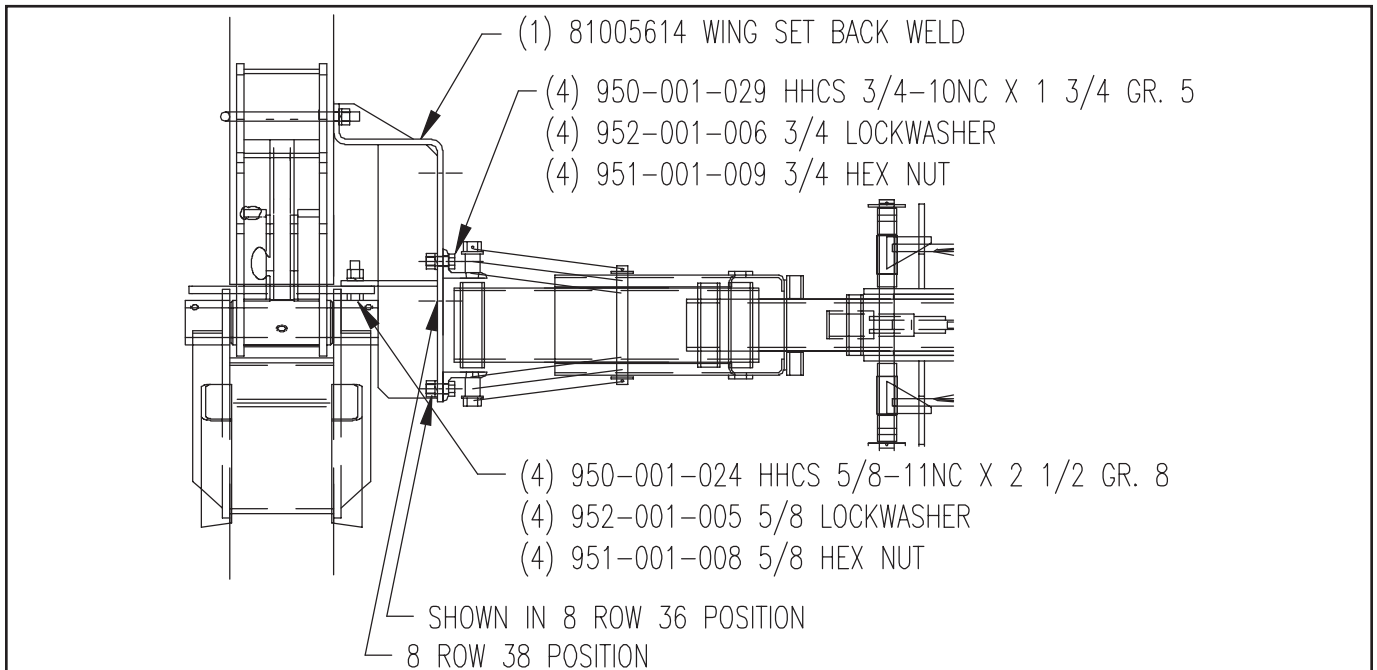
81005606 Row Unit Setback Bracket For 36" - 38" Rows

For 3-Point Mounted 8 Row, 36" - 38" Folding Toolbar Center Toolbar Section
Shown With Telescopic Hitch



DWG. NO. 6426

Wing Toolbar Section



DWG. NO. 6427

Step 5A: Install Strip-Till row unit on toolbar. Mark from center line of toolbar as shown for number of rows and row spacing in assembly diagrams page 16 thru 19.

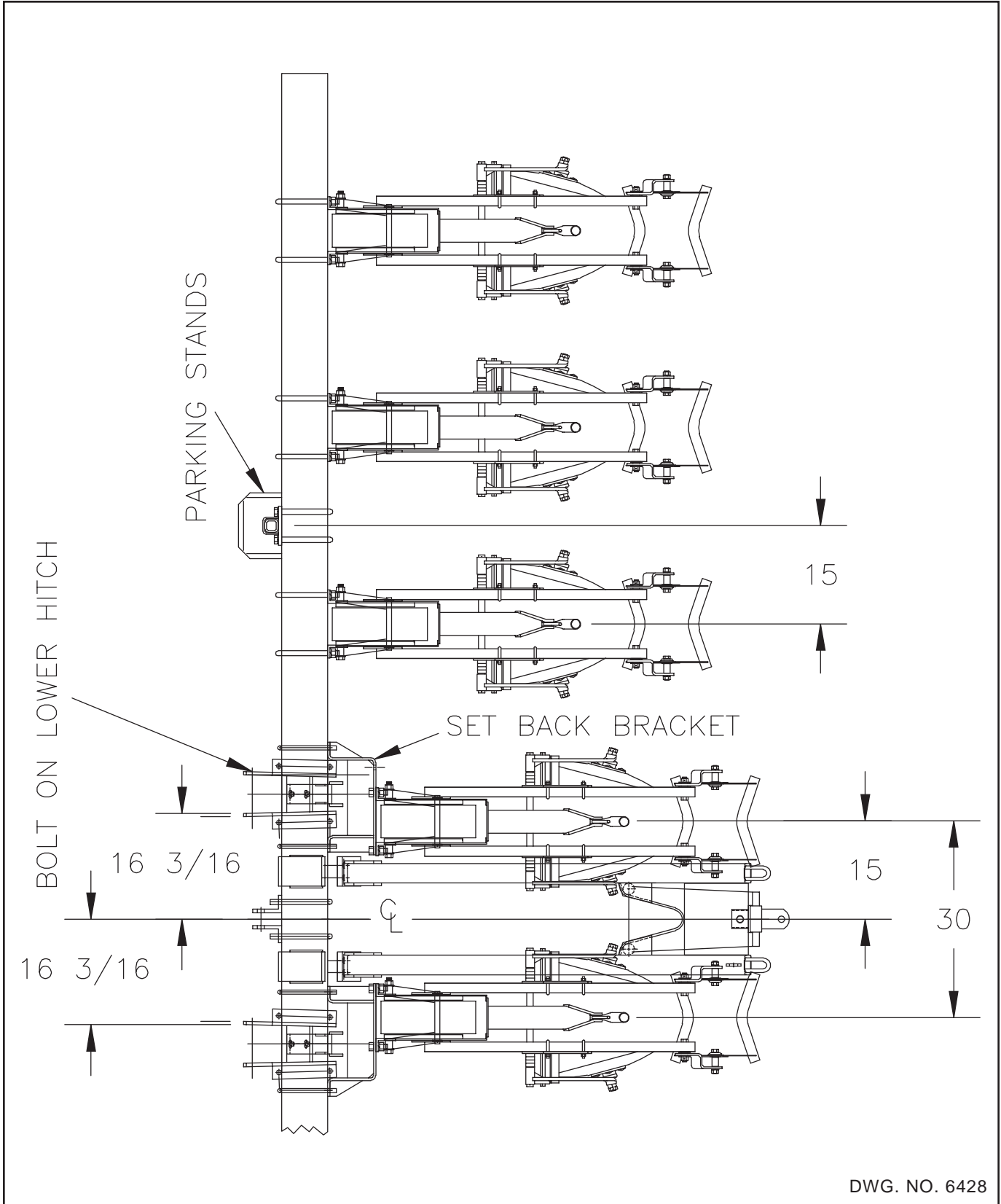
Step 6A: Install hydraulic plumbing on folding toolbar models page 20 and 21.

Step 7A: Continue to row unit attachments page 34 thru 39.

3-Point Mounted On A Strip-Till Rigid Toolbar Assembly Diagrams

6 Row 30 Rigid Toolbar 810-002-235

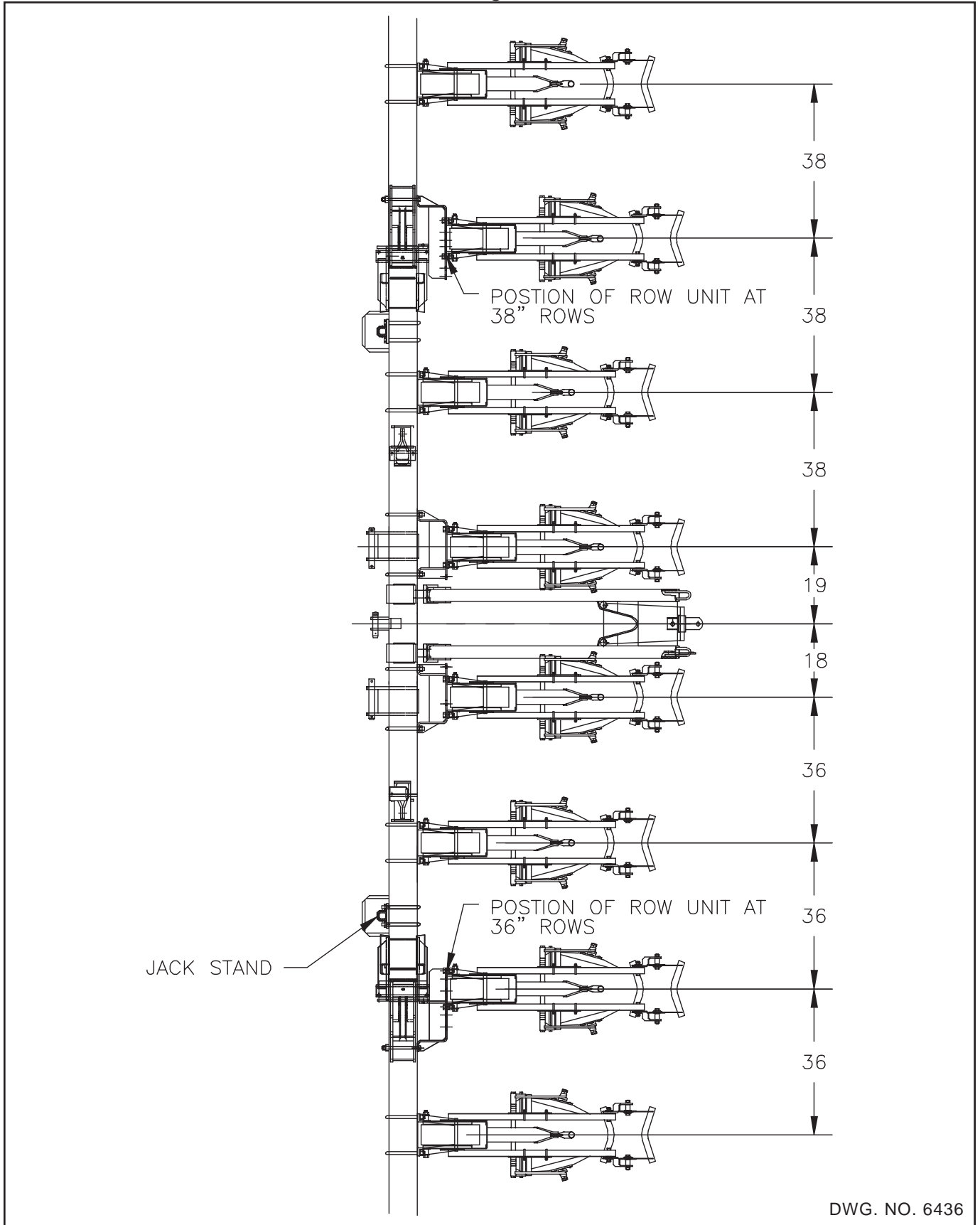
8 Row 30 Rigid Toolbar 810-002-237



3-Point Mounted On A Strip-Till Folding Toolbar

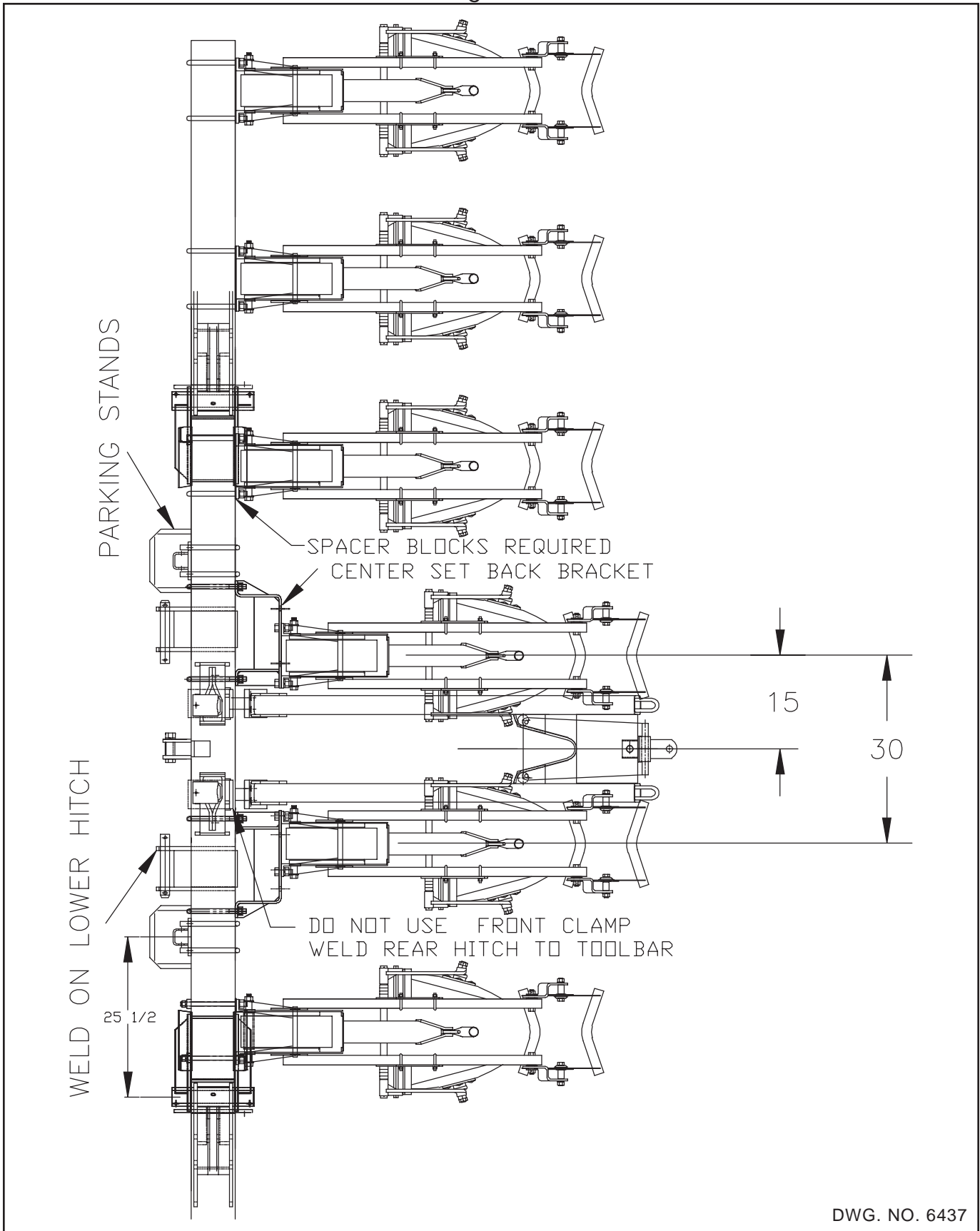
Assembly Diagrams

8 Row 36-38 Folding Toolbar 81004427



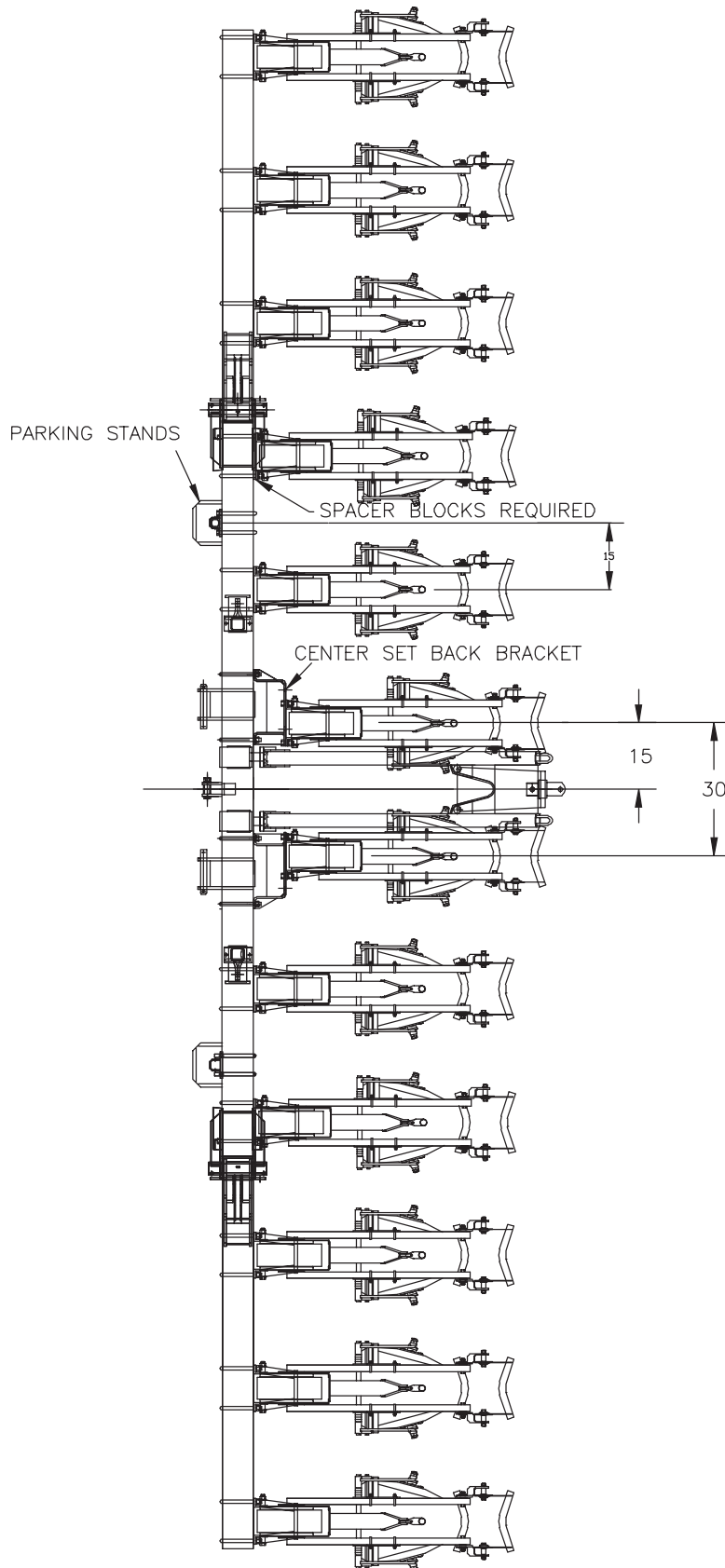
3-Point Mounted On A Dedicated Strip-Till Folding Toolbar Assembly Diagrams

8 Row 30 Folding Toolbar 81005603



3-Point Mounted On A Dedicated Strip-Till Folding Toolbar Assembly Diagrams

12 Row 30 Folding Toolbar 81005604




3-POINT HITCH FOLDING TOOLBARS ONLY

**ASSEMBLY
HYDRAULIC PLUMBING**

Inspect all hydraulic fittings and hoses for damage, wear, and tightness. Ensure that all hoses are secured to frame in such a manner as to prevent possible damage or wear due to chafing or pinching by moving parts.


NOTE: DO NOT overtighten hydraulic fittings. Fittings should be installed and tightened in accordance with the torque table. Only pipe threaded connections should be treated with a thread sealant compatible to hydraulic systems and the sealant applied to male portion of threads only.

**HYDRAULIC FITTING INSTALLATION PROCEDURES
AND TORQUE TABLE**



SAE FLARE CONNECTION

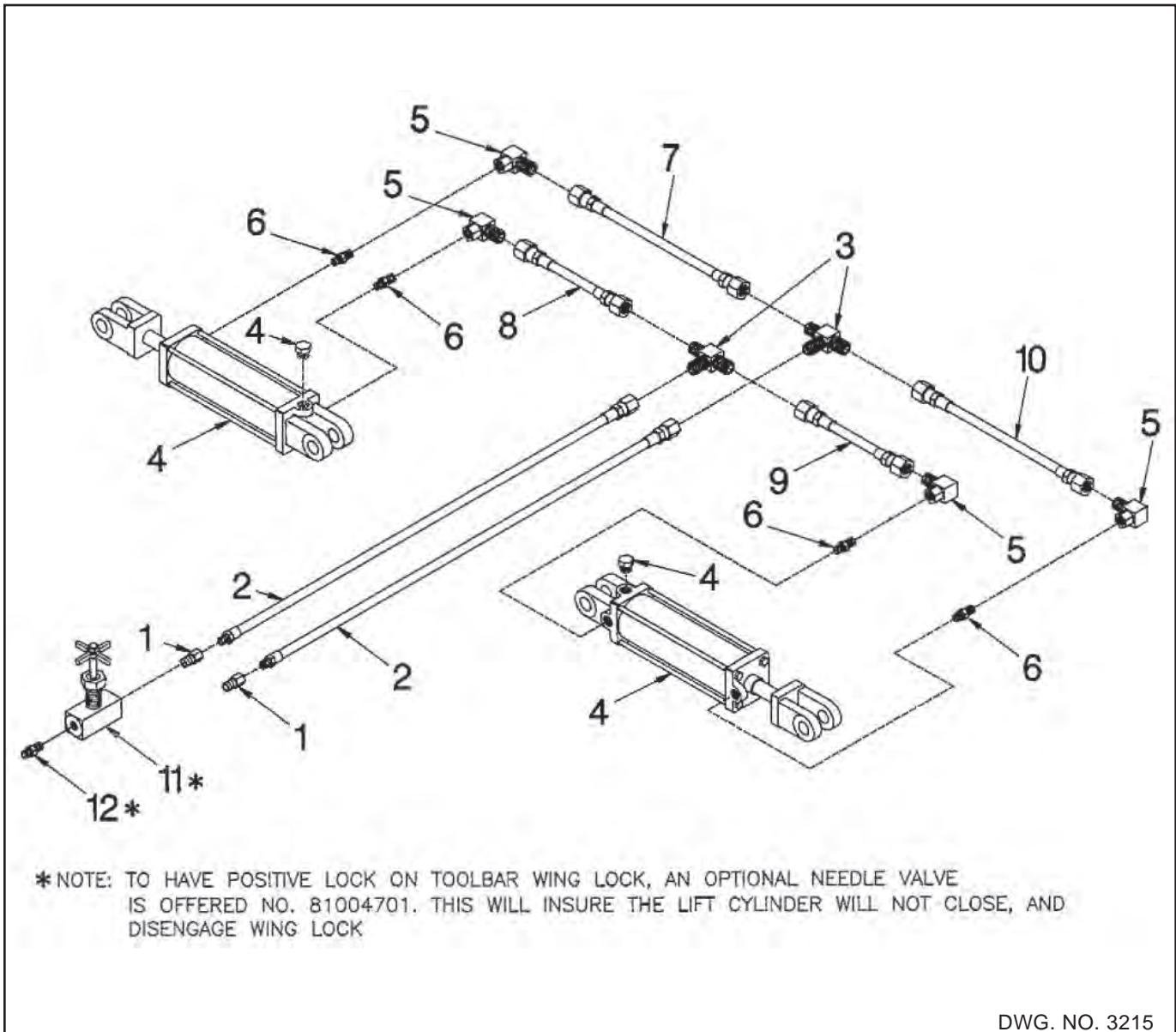
- 1) Tighten nut finger tight until it bottoms the seat.
- 2) Using a wrench, rotate nut to tighten. Turn nut 1/3 turn to apply proper torque.



SAE STRAIGHT THREAD "O" RING SEAL

- 1) Insure jam nut and washer are backed up to the back side of smooth portion of w/bow adapter.
- 2) Lubricate "O" Ring - VERY IMPORTANT
- 3) Thread into port until washer bottoms onto spot face.
- 4) Position elbows by backing up adapter.
- 5) Tighten jam nut.

DWG. NO. 2980



DWG. NO. 3215

**ASSEMBLY HYDRAULIC PLUMBING
DIAGRAM FOLDING TOOLBAR
3-POINT HITCH FOLDING MODELS**

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	956-004-002	Reducer Bushing 1/2 M NPT to 3/8 F NPT	2	9	957-001-006	3/8 Hose Assembly 41" 8 Row 30	1
2	957-002-014	3/8 Hose Assembly - 48"	2		957-001-015	3/8 Hose Assembly 68" 8 Row 36, 38	1
3	956-007-003	Tee 9/16 M Jic to 9/16 M Jic to 9/16 M Jic	2		957-001-018	3/8 Hose Assembly 79" 12 Row 30	1
4	81002580	3.5 Diameter x 16 Cylinder 8 Row 30	2	10	957-001-014	3/8 Hose Assembly 60" 8 Row 30	1
	81004342	4 Diameter x 16 Cylinder 8 Row 36-38, 12 Row 30	2		957-001-057	3/8 Hose Assembly 86" 8 Row 36, 38	1
5	956-005-002	90° Elbow 9/16 F Jic to 9/16 M Jic	4		957-001-020	3/8 Hose Assembly 96" 12 Row 30	1
6	956-008-024	Restrictor 3/4 M O-Ring to 9/16 M Jic 3.5 & 4 Cyl.	4	11	81004701	3/8 Needle Valve (Optional)	1
7	957-001-009	3/8 Hose Assembly 50" 8 Row 30	1	12	956-003-022	Straight Adapter 3/8 M to 1/2 M (Optional)	1
	957-001-017	3/8 Hose Assembly 72" 8 Row 36-38	1				
	957-001-018	3/8 Hose Assembly 79" 12 Row 30	1				
8	957-001-004	3/8 Hose Assembly 29" 8 Row 30	1				
	957-001-009	3/8 Hose Assembly 50" 8 Row 36, 38	1				
	957-001-014	3/8 Hose Assembly 60" 10 Row 30, 12 Row 30	1				



BEFORE OPERATING HYDRAULIC WING LIFT CYLINDERS, ALL CAPTIVE AIR MUST BE REMOVED FROM SYSTEM. THIS MAY BE DONE BY REMOVING CYLINDER PIN FROM ROD END OF CYLINDER AND CYCLING CYLINDER AND SYSTEM UNTIL SYSTEM IS PURGED OF AIR. REATTACH CYLINDER ROD PIN AND CAUTIOUSLY CYCLE STRIP-TILL THROUGH FULL CYCLE. FAILURE TO TAKE PRECAUTION MAY RESULT IN BODILY INJURY OR EQUIPMENT DAMAGE.



IMPORTANT: NEVER OPERATE WING LIFT CYLINDERS WITHOUT (4) RESTRICTOR FITTINGS PART NO. 956-008-024 FOR 3 1/2 AND 4 INCH CYLINDER OR 956-008-025 FOR 5 INCH CYLINDER, ONE AT EACH END OF BOTH CYLINDERS. FAILURE TO HAVE RESTRICTORS IN PLACE MAY RESULT IN BODY INJURY OR EQUIPMENT DAMAGE.

FOLDING TOOLBAR ONLY

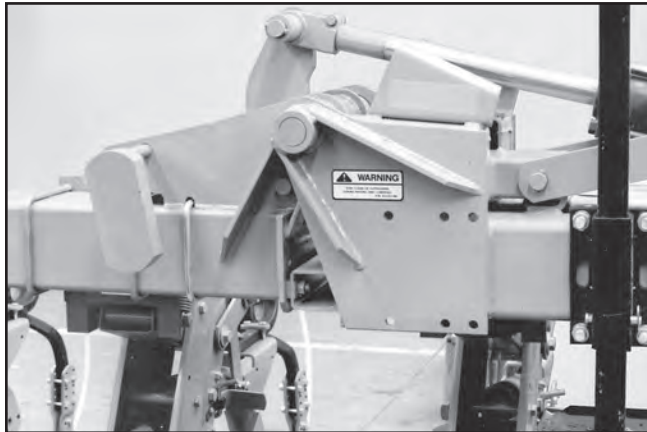
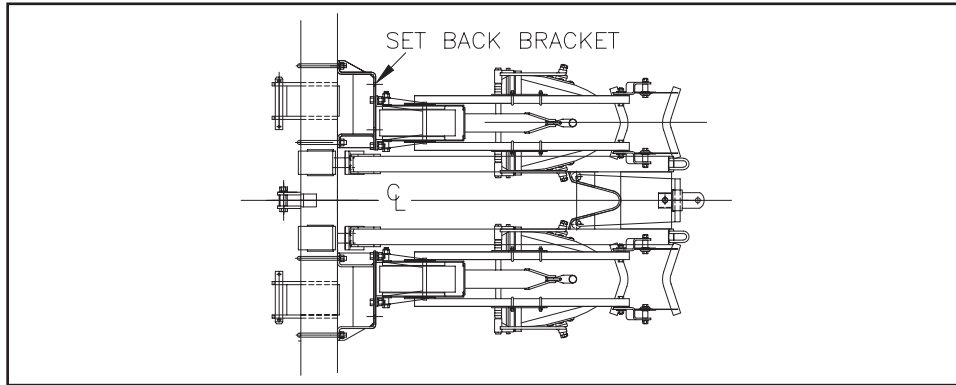


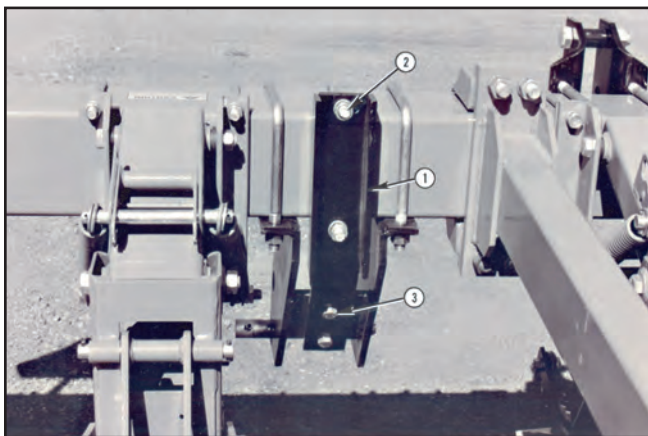
PHOTO NO. 3317

See assembly of toolbar wing lock page 51.

81004902 Telescoping Rear Hitch Assembly 3-Point Mounted 8, 12 Row 30

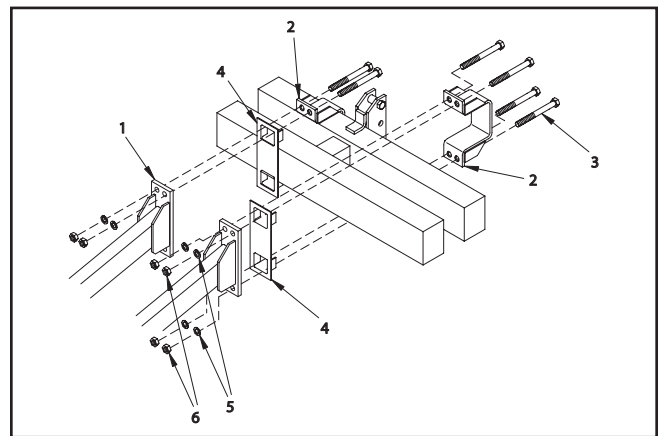


DWG. NO. 6439



Rigid Toolbar

PHOTO NO. 3285



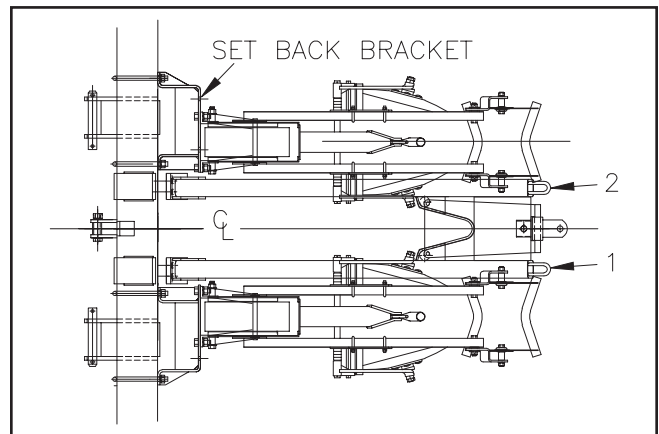
Twin 5 x 7 Toolbar

DWG. NO. 3243

(Bolt on lower hitch models only)

Install two hitch supports (Arrow 1) using 3/4 inch U-Bolt (arrow 2) and 5/8 x 2 1/2 inch bolts (Arrow 3).

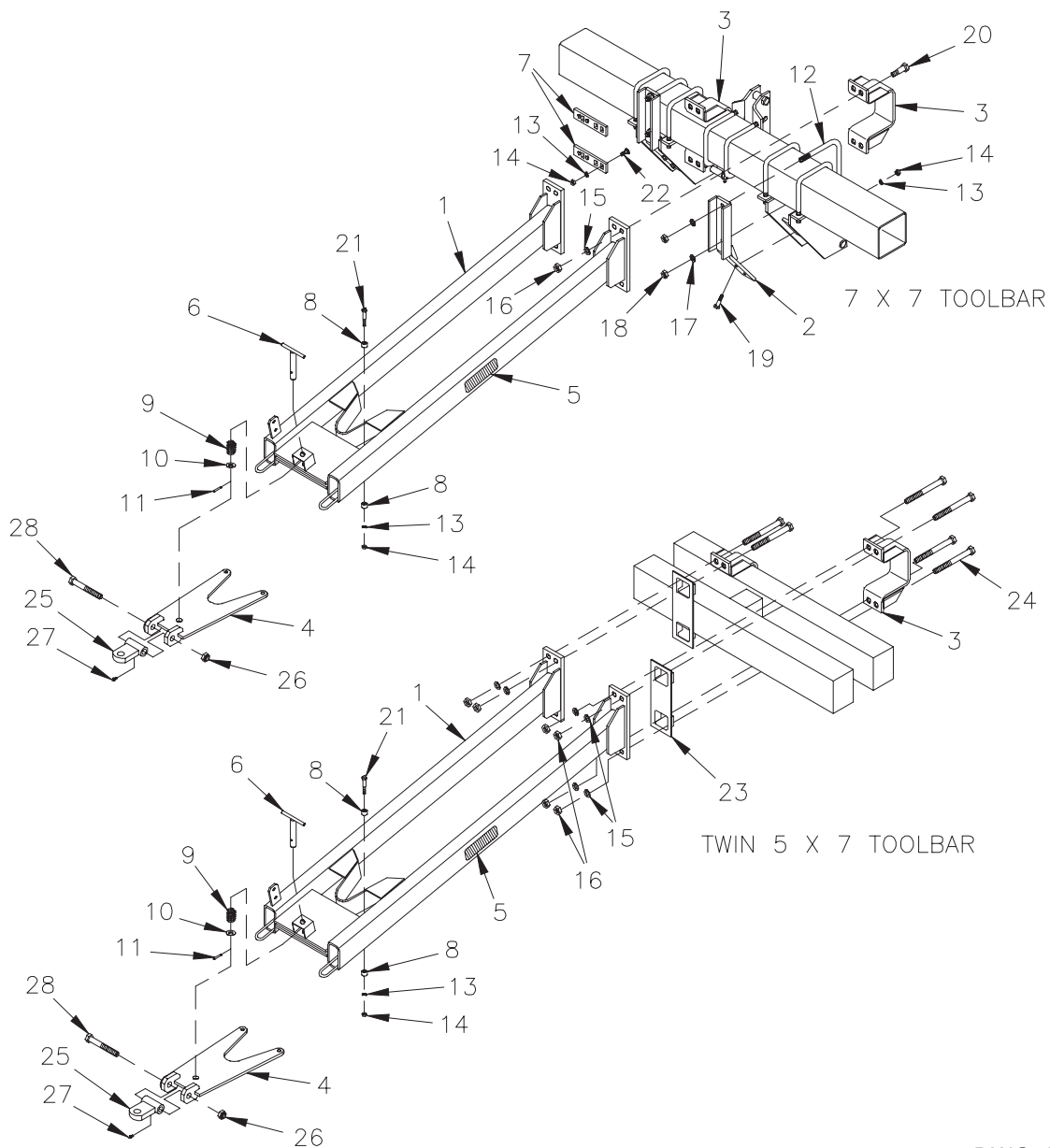
Install rear hitch (Arrow 1) centered around upper 3-point hitch and center tillage unit as shown. Install two front mount strap welds (Arrow 2) using eight 7/8 x 10 inch hex bolts (Arrow 3). Install two lock plates (Arrow 4). Slide rear hitch forward over the 7/8 hex bolt. Lock in place with eight lock washers (Arrow 5) and eight 7/8 hex nut (Arrow 6).



DWG. NO. 6440

When pulling NH₃ tank use safety anchor loops (Arrow 1) or (Arrow 2) to secure safety chain.

81004902 Telescoping Rear Hitch Assembly (Continued)

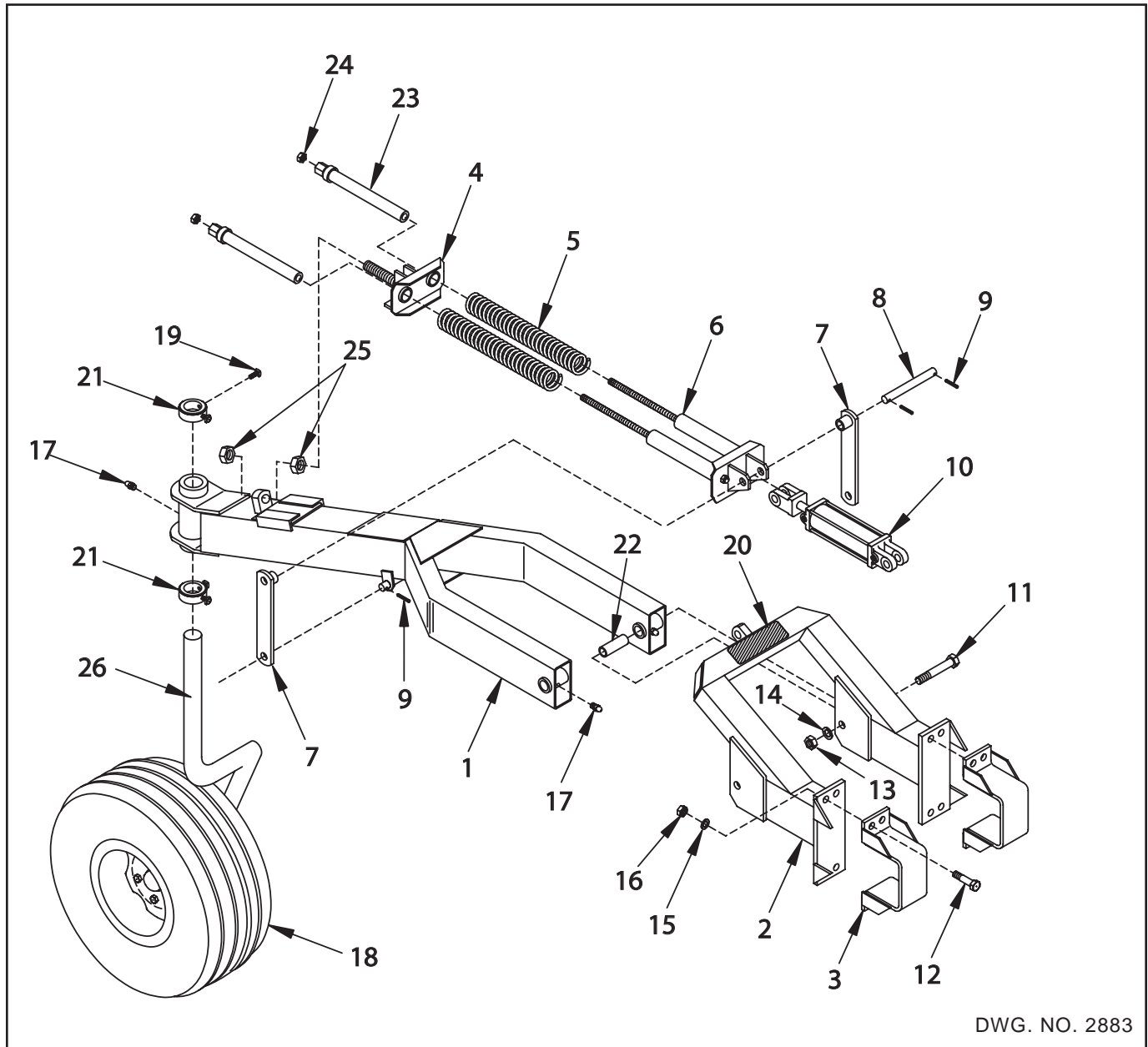


DWG. NO. 6322

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81004971	Hitch Weldment	1	15	952-001-008	Lock Washer 7/8 Inch	14
2	810-002-212	Support Weldment	2	16	951-001-010	Hex Nut 7/8-9	8
3	81004153	Mount Strap Weldment	2	17	952-001-006	Lock Washer 3/4 Inch	8
4	81005866	Hitch Plate Weldment	1	18	951-001-009	Hex Nut 3/4-10	4
5	81004136	Decal	2	19	950-001-147	Hex Head Cap Screw 5/8-11 x 2 1/2 Gr. 5	4
6	810-001-522	Handle Weldment	1	20	950-001-168	Hex Head Cap Screw 7/8-9 x 3 Gr. 5	8
7	810-001-551	Shield Mount Strap (Used With Rotary Hoe Wheel & Rolling Shields)	4	21	950-001-141	Hex Head Cap Screw 5/8-11 x 3 Gr. 5	2
8	810-001-526	Collar	4	22	950-003-021	Carriage Bolt 5/8-11 x 1 1/4 Gr. 2	8
9	810-001-527	Spring	1	23	81004690	Lock Plate	2
10	952-002-010	Flat Washer 1 Inch	1	24	950-001-210	Hex Head Cap Screw 7/8-9 x 10 Gr. 5	8
11	953-003-003	Spring Pin 1/4 x 1 3/4	1		81004902	Complete Telescoping Rear Hitch Assembly	
12	875-001-038	U-Bolt	N/A	25	81005863	Hitch Plate Weldment	1
13	952-001-005	Lock Washer 5/8 Inch	2	26	062041	Lock Nut 1-8	1
14	951-001-008	Hex Nut 5/8-11	14	27	955-001-002	Grease Fitting 1/4-28	1
				28	062065	Hex Head Cap Screw 1-8 x 7 Gr. 8	1

81004903 Single Lift Assist Assembly

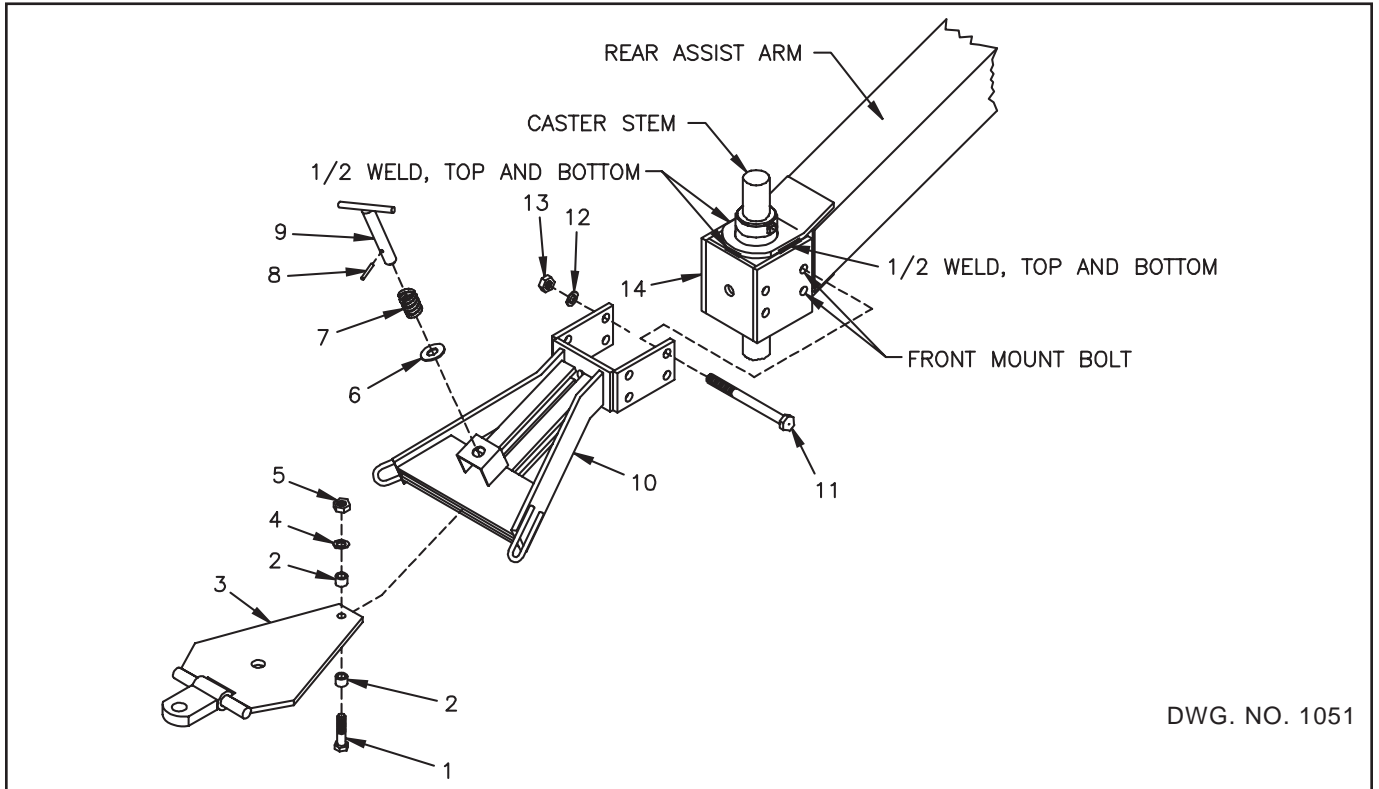
3-Point Mounted 8 Row Rigid 8 & 12 Row 30 Fold Toolbar



DWG. NO. 2883

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81004963	Rear Mast Weldment	1	14	952-001-009	Lock Washer 1 Inch	2
2	81004959	Front Mast Weldment	1	15	952-001-008	Lock Washer 7/8 Inch	8
3	81004153	Mount Strap Weldment	2	16	951-001-010	Hex Nut 7/8-9	8
4	81002661	Rear Guide Weldment	1	17	955-001-001	Grease Fitting	3
5	880-001-071	Compression Spring	2	18	850-001-568	Tire And Rim Assembly 9.5L x 15	1
6	81002660	Front Guide Weldment	1	19	950-008-009	Square Head Set Screw 1/2-13 x 1	4
7	81002647	Link Arm Weldment	2	20	81002607	Caution Decal	1
8	81002648	Cylinder Arm Pin	1	21	805-001-105	Stem Collar	2
9	953-003-017	Spring Pin 5/16 x 2	4	22	810-002-188	Sleeve	2
10	81004503	Hydraulic Cylinder 3 x 8	1	23	81002665	Spring Guide Weldment	2
11	950-001-186	Hex Head Cap Screw 1-8 x 6 Gr. 5	2	24	034-05173	Uni-Torque Lock Nut 3/4-10	2
12	950-001-168	Hex Head Cap Screw 7/8-9 x 3 Gr. 5 (Fits 7 x 7)	8	25	951-001-022	Hex Nut 1 1/4-7	2
	950-001-210	Hex Head Cap Screw 7/8-9 x 10 Gr. 5 (Fits Twin 5 x 7)	8	26	81004903	Complete Single Lift Assist	
13	951-001-024	Hex Nut 1-8	2				

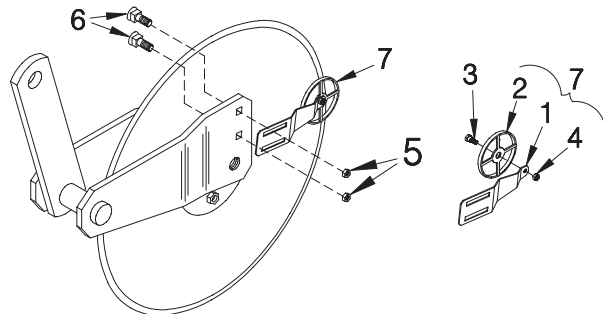
6314 Telescoping Rear Hitch Assembly For Use With Single Lift Assist



DWG. NO. 1051

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	950-001-141	Hex Head Bolt 5/8-11 x 3	1	9	810-001-522	Handle Weldment	1
2	810-001-526	Collar	2	10	810-001-580	Anhydrous Hitch Weldment	1
3	810-001-518	Hitch Plate Weldment	1	11	950-001-151	Hex Head Bolt 3/4-10 x 9 Gr. 5	4
4	952-001-005	Lock Washer 5/8	1	12	952-001-006	Lock Washer 3/4 inch	4
5	951-001-008	Hex Nut 5/8-11	1	13	951-001-009	Hex Nut 3/4-10	4
6	952-002-010	Flat Washer 1 Inch	1	14	810-001-578	Mount Weldment	1
7	810-001-527	Spring	1	6314		Complete Anhydrous Hitch Assembly	
8	953-003-003	Spring Pin 1/4 x 1-3/4	1				

81004118 Rotary Coultter Scraper



DWG. NO. 6555

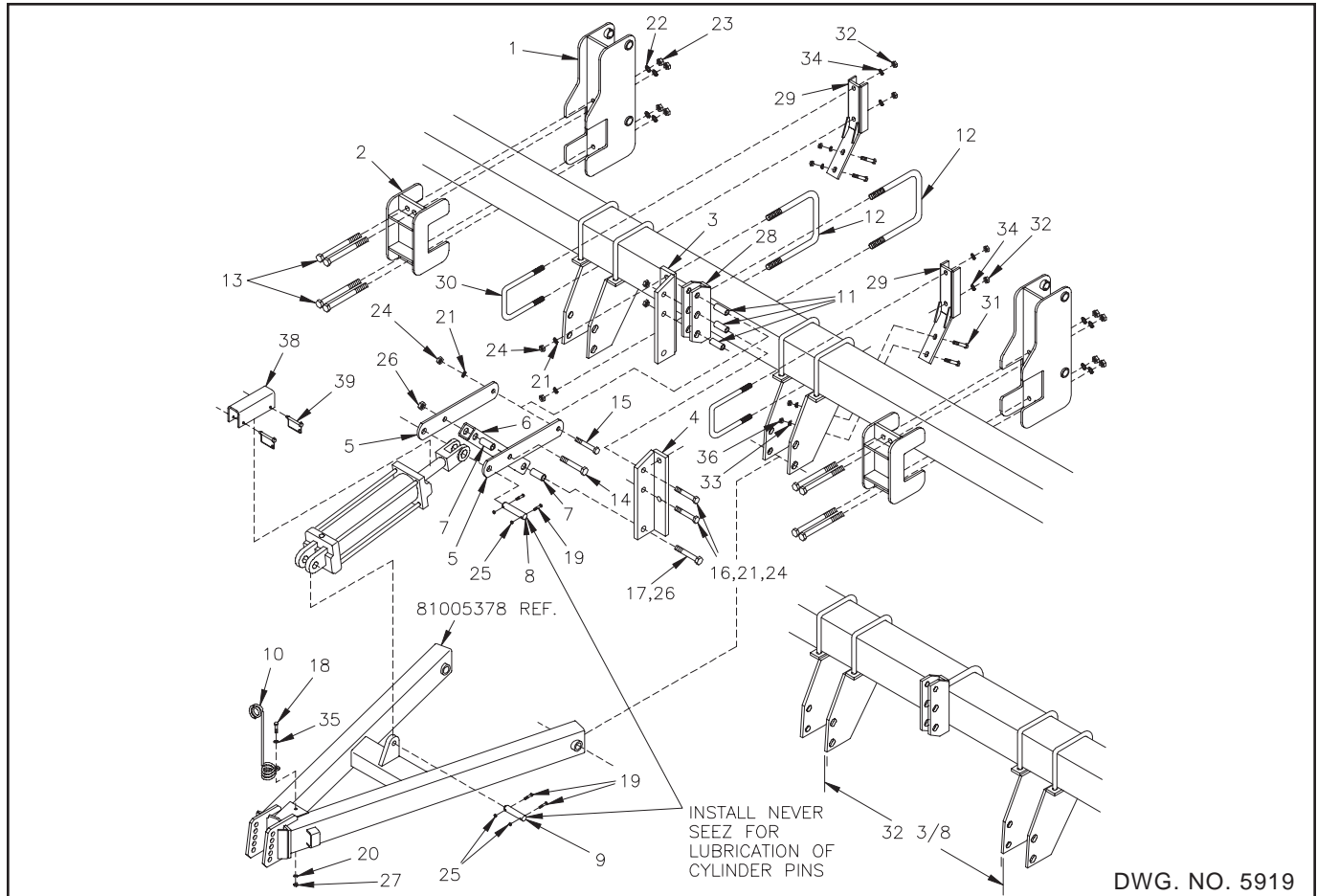
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81004114	Flat Spring	2	5	951-005-003	Lock Nut 3/8-16	4
2	81004115	Rotary Scraper	2	6	950-003-024	Carriage Bolt 3/8-16 x 3/4 Gr. 5	4
3	950-006-002	Hex Head Shoulder Bolt 5/16-18 x 5/8	2	7	81004121	Rotary Scraper Assembly	2
4	951-005-064	Lock Nut 5/16-18, 2-Way	2	81004118		Complete Rotary Scraper Assembly (1 Row)	

Strip-Till Toolbar With Trail Hitch, Fertilizer Cart Rigid Toolbar 12 Row 22 Only

Step 1B: Support toolbar on stands approximately 44 inches high. Mark the center of the toolbar.

Step 2B: Install right and left center mount brackets (Arrow 3 & 4) and lower hitch (hold 32 3/8 dimension) and support (Arrow 29) as shown below.

Step 3B: Install front mount weldment (Arrow 1) with its front clamp weldment (Arrow 2). See assembly page 27 for locations. Install all hitch and lift cylinder components as shown below.



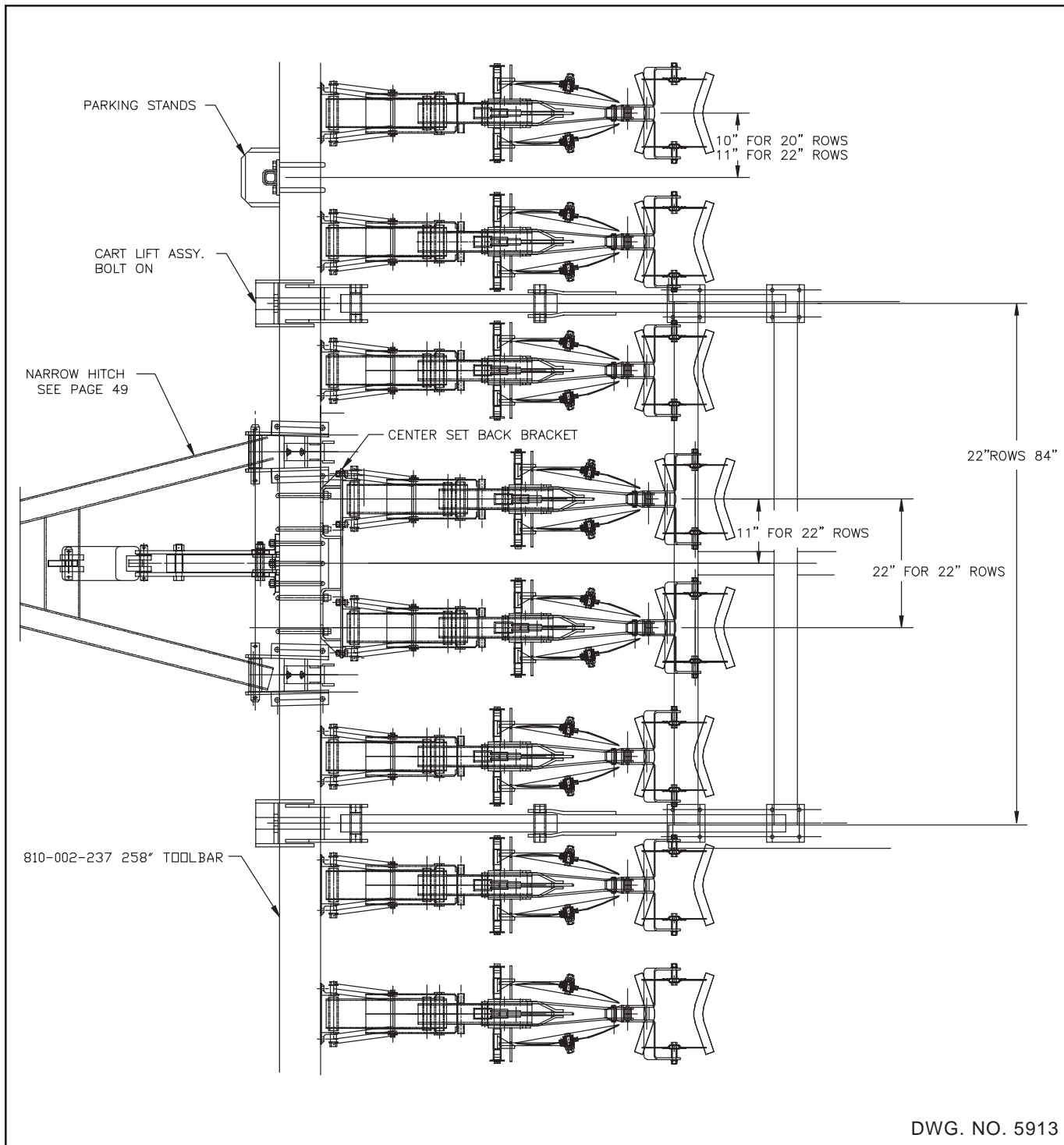
DWG. NO. 5919

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005266	Front Mount Weldment	2	20	952-001-004	Lock Washer 1/2 Inch Med Split SAE	1
2	81005426	Front Hitch Clamp Weldment	2	21	952-001-008	Lock Washer 7/8 Inch Med Split SAE	9
3	81005417	RH Center Toolbar Mount Bracket Weldment	1	22	952-001-009	Lock Washer 1 Inch Med Split SAE	8
4	81005416	LH Center Toolbar Mount Bracket Weldment	1	23	951-001-011	Hex Nut 1-8	8
5	81005383	Lever	2	24	951-001-010	Hex Nut 7/8-9	9
6	81005204	Tube	1	25	951-005-051	Lock Nut 3/8-16 2-Way	4
7	81005195	Pivot Spacer	2	26	30008667	Lock Nut 1-8 2-Way	2
8	80504265	Pin	1	27	951-001-007	Hex Nut 1/2-13	1
9	627275	Pivot Pin	1	28	81005420	Mount Plate Weldment	1
10	000-69096	Hose Carrier	1	29	810-002-212	Support Weldment	2
11	81005200	Spacer 3 3/16	3	30	875-001-038	U-Bolt Plated	2
12	81003235	U-Bolt 7/8-11 x 7 7/8	3	31	950-001-185	Hex Head Cap Screw 5/8-11 x 2 1/4 Gr. 5	4
13	950-001-252	Hex Head Cap Screw 1-8 x 10 Gr. 5	8	32	951-001-009	Hex Nut 3/4-10	4
14	950-001-215	Hex Head Cap Screw 1-8 x 5 1/2 Gr. 8	1	33	952-001-005	Lock Washer 5/8 Inch Med Split SAE	4
15	950-001-169	Hex Head Cap Screw 7/8-9 x 5 1/2 Gr. 5	1	34	952-001-006	Lock Washer 3/4 Inch Med Split SAE	4
16	950-001-160	Hex Head Cap Screw 7/8-9 x 6 Gr. 5	2	35	952-002-005	Flat Washer 1/2 Inch Wrt	1
17	950-001-186	Hex Head Cap Screw 1-8 x 6 Gr. 5	1	36	951-001-008	Hex Nut 5/8-11	4
18	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	1	37	80305383	5 x 8 Cylinder Assembly (See Page 59)	1
19	950-001-092	Hex Head Cap Screw 3/8-16 x 1 3/4 Gr. 5	4				

Strip-Till Rigid Toolbar W/Hitch And Cart

Assembly Diagrams

12 Row 22 Rigid Toolbar



Step 4B: Install setback bracket as shown above.

Step 5B: Install Strip-Till row unit on toolbar. Mark from center line of toolbar, as shown for number of rows and row spacings in assembly diagram above.

Step 6B: Continue to row unit attachments page 34 thru 39 and the fertilizer cart installation page 41 thru 50.

Strip-Till With Pull Type Fertilizer Cart Folding Toolbar

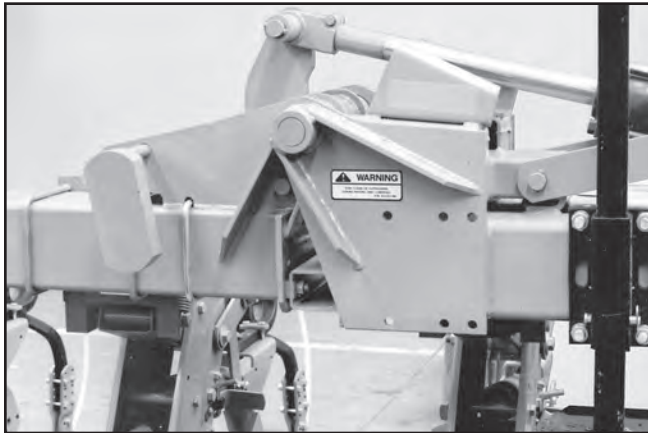


PHOTO NO. 3317

Do not remove them completely at this time. Swing wing section down into working position as shown in photo. Lift toolbar and place it on stands approximately 44 inches high.

Remove (2) shipping pads from under front lower hitch. They will not be used.

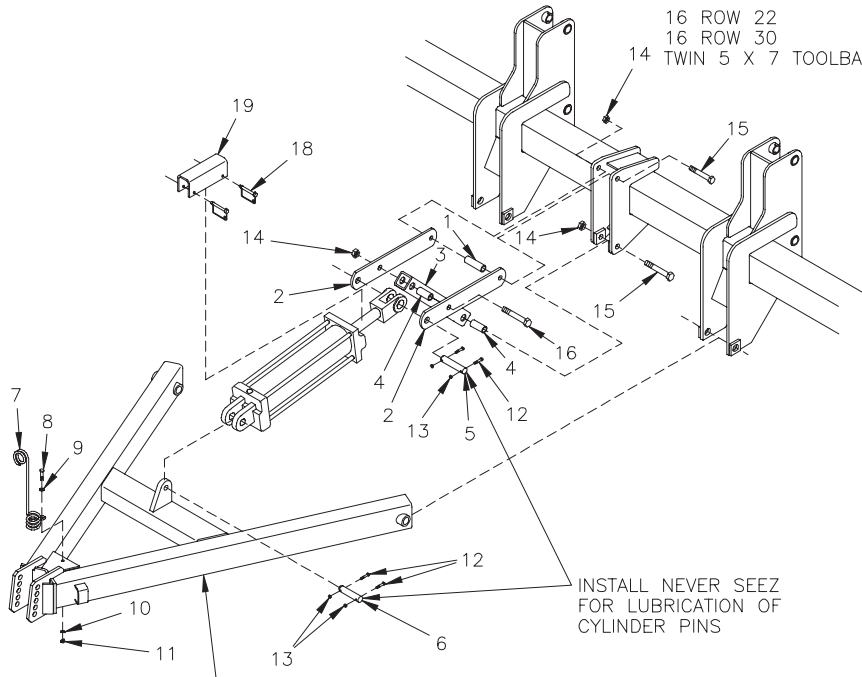
See assembly of toolbar wing lock page 51.

Remove parking stands from rear side of folding toolbar at this time. They will be installed later.

Step 1C: With toolbar on the floor, cut shipping straps that hold the wing sections. Loosen hydraulic cylinder port plugs to allow air escape.

Step 2C: Install hitch and lift cylinder components as shown below and next page.

Wide Hitch Assembly Strip-Till 12 Row 30 Fold Toolbar

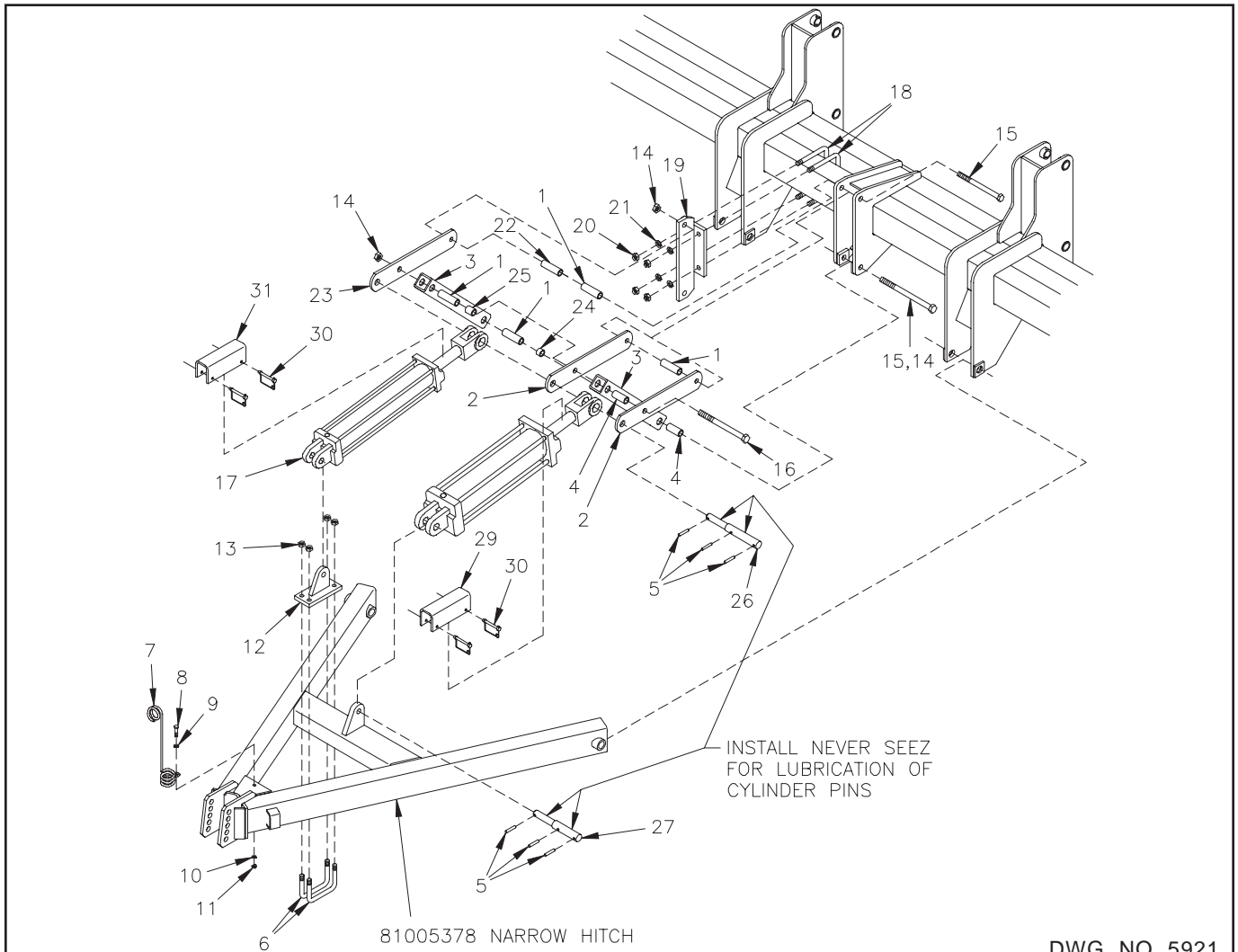


81005377 WIDE HITCH
81005378 NARROW HITCH

DWG. NO. 5920

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005197	Spacer 4 1/2 Long	1	11	951-001-007	Hex Nut 1/2-13	1
2	81005201	Lever	2	12	950-001-092	Hex Head Cap Screw 3/8-16 x 1 3/4 Gr. 5	4
3	81005204	Tube	1	13	951-005-051	Lock Nut 3/8-16 2-Way	4
4	81005195	Pivot Spacer	2	14	30008667	Lock Nut 1-8 2-Way	3
5	80504265	Pin	1	15	062065	Hex Head Cap Screw 1-8 x 7 Gr. 8	2
6	627275	Pivot Pin	1	16	950-001-186	Hex Head Cap Screw 1-8 x 6 Gr. 5	1
7	000-69096	Hose Carrier	1	17	80305383	5 x 8 Cylinder Assembly (See Page 75)	1
8	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	1	18	79202747	Cylinder Stop	1
9	952-002-005	Flat Washer 1/2 Inch WRT	1	19	79202748	Tab Lock Pin 3/8 x 3	2
10	952-001-004	Lock Washer 1/2 Inch Med Split SAE	1				

Narrow Hitch Assembly Strip-Till Twin Tube Toolbar 16 Row 22



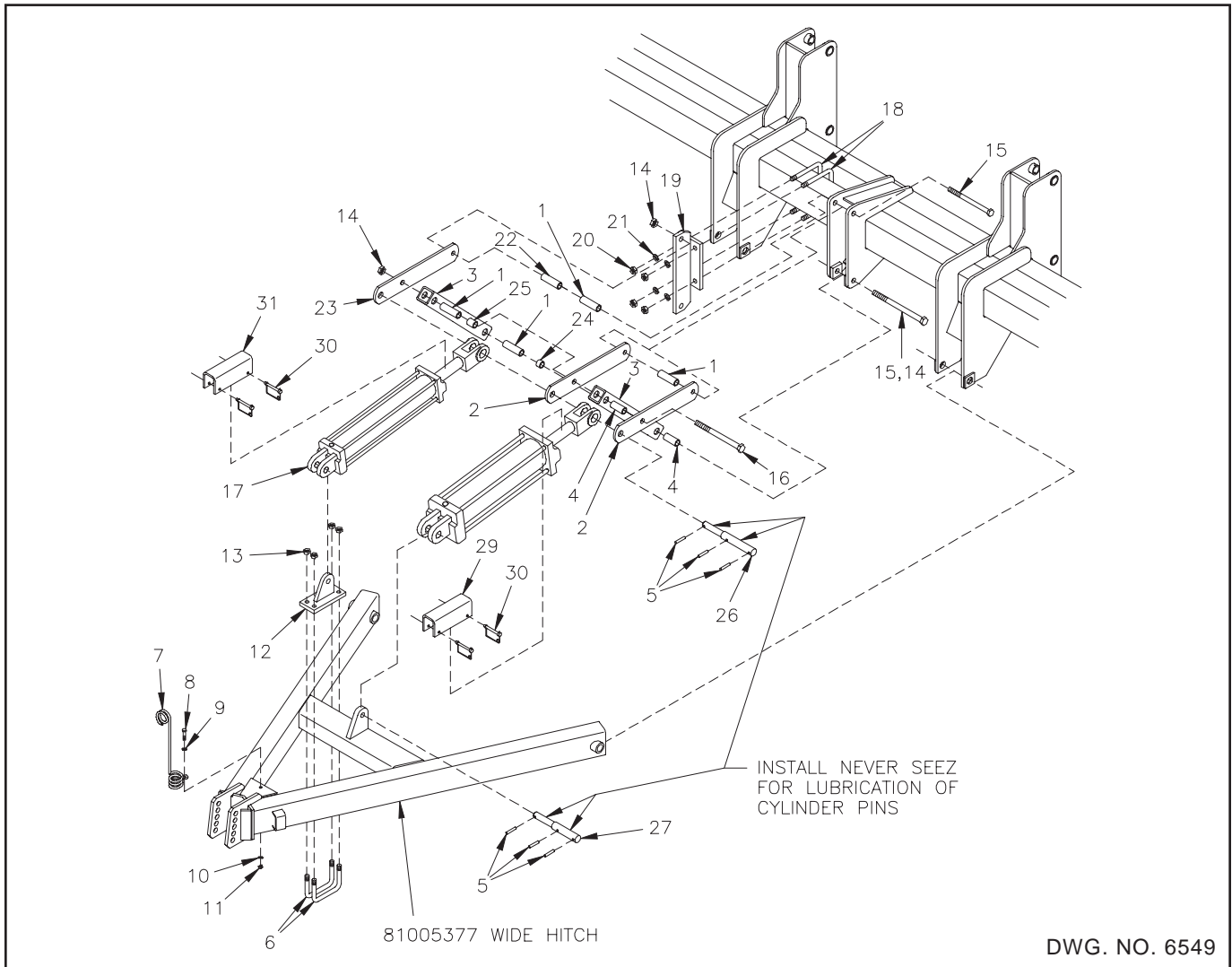
DWG. NO. 5921

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005197	Spacer 4 1/2 Long	4	17	81004503	3 x 8 Cylinder Assembly SAE	1
2	81005201	Lever	2	18	624377	U-Bolt 7/8-9 x 7 7/8	2
3	81005204	Tube	2	19	81005375	Mount Bracket Weldment	1
4	81005195	Pivot Spacer	2	20	951-001-010	Hex Nut 7/8-9	4
5	30009024	Slotted Spring Pin 3/8 x 2	6	21	952-001-008	Lock Washer 7/8 Inch Med Split SAE	4
6	860-001-413	U-Bolt 6 3/4	2	22	81005196	Out Spacer 3 3/4	1
7	000-69096	Hose Carrier	1	23	81005202	Outer Lever	1
8	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	1	24	81005199	Outer Spacer 3/4	1
9	952-002-005	Flat Washer 1/2 Inch WRT	1	25	81005198	Outer Spacer 1 3/8	1
10	952-001-004	Lock Washer 1/2 Inch Med Split SAE	1	26	81005221	Upper Pin	1
11	951-001-007	Hex Nut 1/2-13	1	27	81005222	Lower Pin	1
12	81005245	Cylinder Attaching Weldment	1	28	80305383	5 x 8 Cylinder Assembly (See Page 75)	1
13	951-005-037	Lock Nut 3/4-10 2-Way	4	29	79202747	Cylinder Stop	1
14	30008667	Lock Nut 1-8 2-Way	3	30	79202748	Tab Lock Pin 3/8 x 3	4
15	950-001-280	Hex Head Cap Screw 1-8 x 12 Gr. 5	2	31	81006039	Cylinder Stop	1
16	950-001-281	Hex Head Cap Screw 1-8 x 11 Gr. 5	1				

Step 3C: Install Strip-Till row unit on toolbar. Mark from center line of toolbar, as shown for number of rows and row spacing in assembly diagrams page 30 thru 33.

Step 4C: Continue to row unit attachments page 34 thru 39 and the fertilizer cart installation page 41 thru 50.

Wide Hitch Assembly Strip-Till Twin Tube Toolbar 16 Row 30



DWG. NO. 6549

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005197	Spacer 4 1/2 Long	4	17	81004503	3 x 8 Cylinder Assembly SAE	1
2	81005201	Lever	2	18	624377	U-Bolt 7/8-9 x 7 7/8	2
3	81005204	Tube	2	19	81005375	Mount Bracket Weldment	1
4	81005195	Pivot Spacer	2	20	951-001-010	Hex Nut 7/8-9	4
5	30009024	Slotted Spring Pin 3/8 x 2	6	21	952-001-008	Lock Washer 7/8 Inch Med Split SAE	4
6	860-001-413	U-Bolt 6 3/4	2	22	81005196	Out Spacer 3 3/4	1
7	000-69096	Hose Carrier	1	23	81005202	Outer Lever	1
8	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	1	24	81005199	Outer Spacer 3/4	1
9	952-002-005	Flat Washer 1/2 Inch WRT	1	25	81005198	Outer Spacer 1 3/8	1
10	952-001-004	Lock Washer 1/2 Inch Med Split SAE	1	26	81005221	Upper Pin	1
11	951-001-007	Hex Nut 1/2-13	1	27	81005222	Lower Pin	1
12	81005245	Cylinder Attaching Weldment	1	28	80305383	5 x 8 Cylinder Assembly (See Page 75)	1
13	951-005-037	Lock Nut 3/4-10 2-Way	4	29	79202747	Cylinder Stop	1
14	30008667	Lock Nut 1-8 2-Way	3	30	79202748	Tab Lock Pin 3/8 x 3	4
15	950-001-280	Hex Head Cap Screw 1-8 x 12 Gr. 5	2	31	81006039	Cylinder Stop	1
16	950-001-281	Hex Head Cap Screw 1-8 x 11 Gr. 5	1				

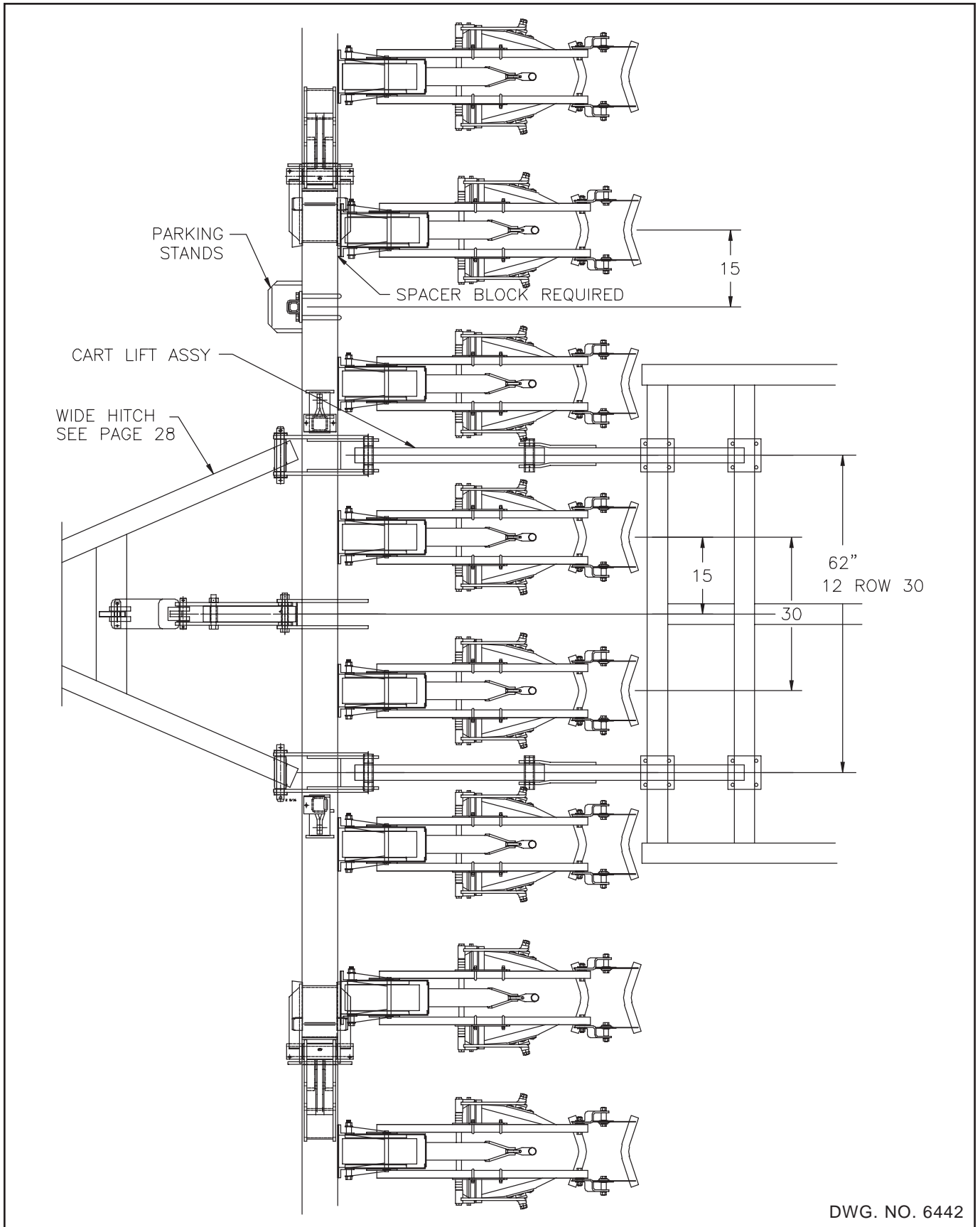
Step 3D: Install Strip-Till row unit on toolbar. Mark from center line of toolbar, as shown for number of rows and row spacing in assembly diagrams page 31 thru 33.

Step 4D: Continue to row unit attachments page 34 thru 41 and the fertilizer cart installation page 42 thru 52.

Strip-Till Folding Toolbar W/Hitch And Cart

Assembly Diagrams

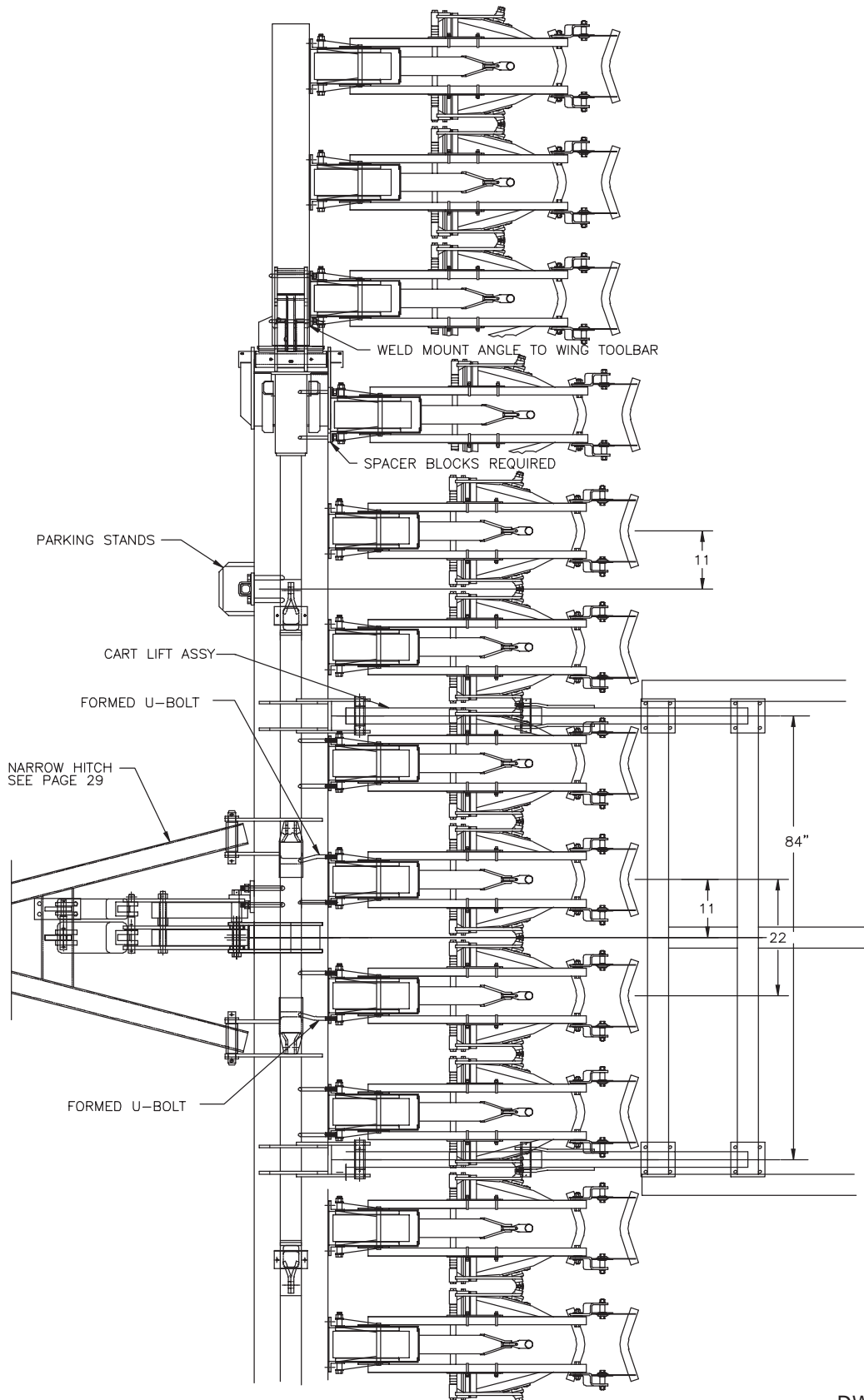
12 Row 30 Folding Toolbar



Strip-Till Folding Toolbar W/Hitch And Cart

Assembly Diagrams

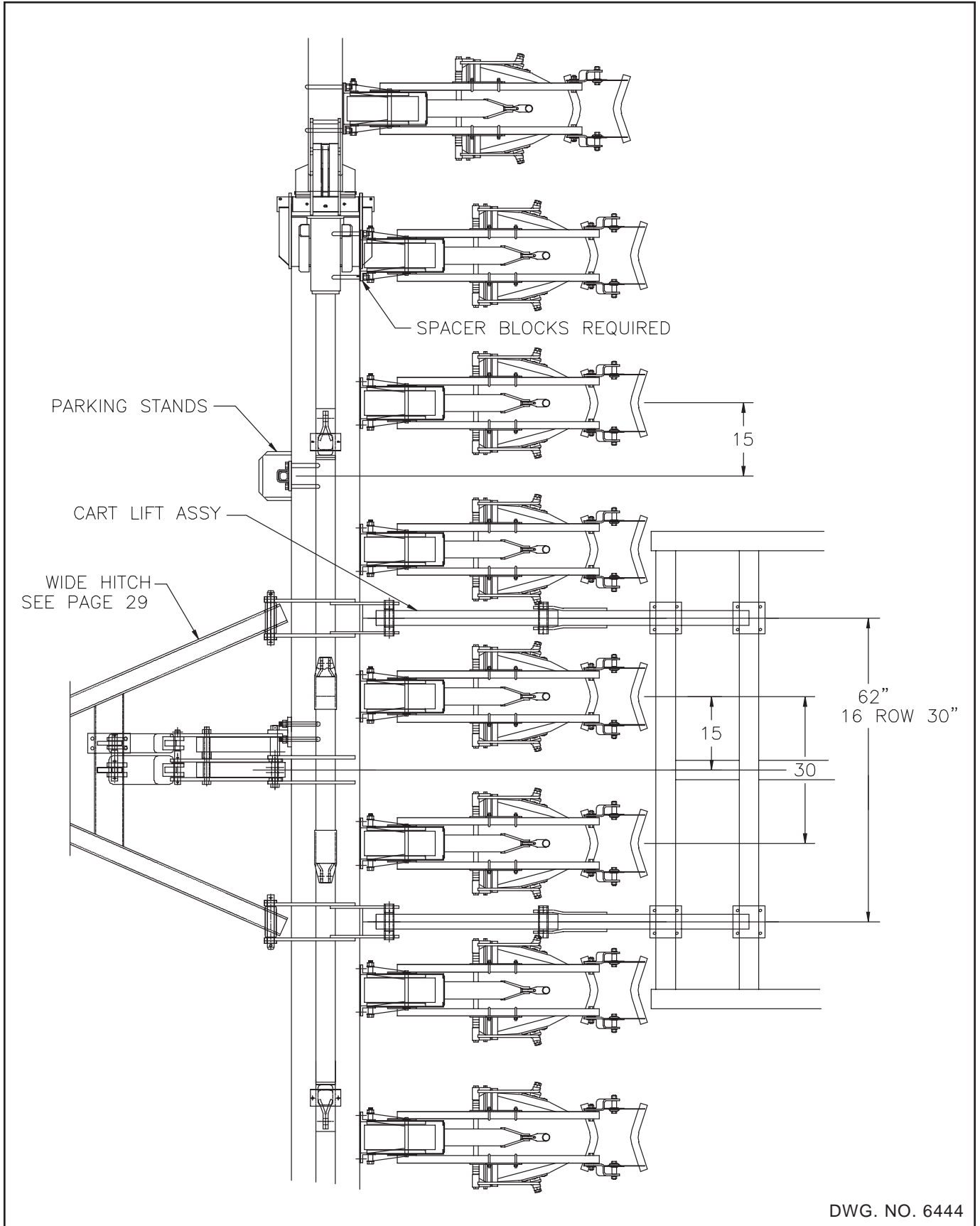
16 Row 22 Folding Toolbar



Strip-Till Folding Toolbar W/Hitch And Cart

Assembly Diagrams

16 Row 30 Folding Toolbar



81005129 Adjustable Row Cleaner Assembly

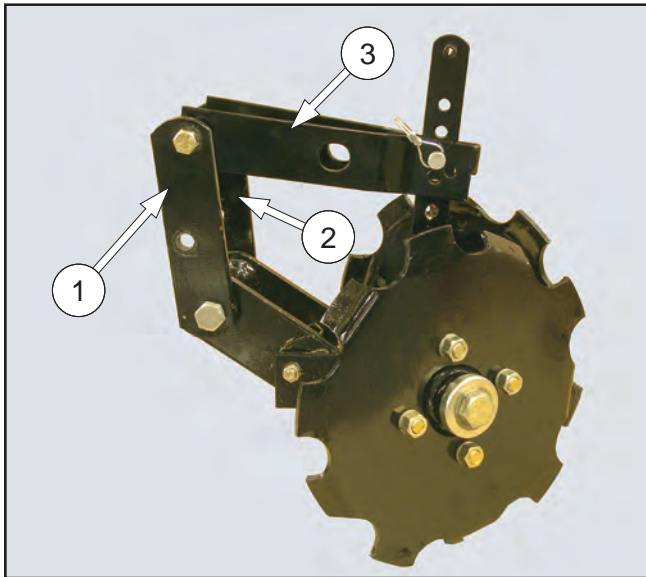


PHOTO NO. PICT0048A

Remove the two mounting straps (Arrow 1 & 2) and top anchor plate weldment (Arrow 3) from shipping bundle.

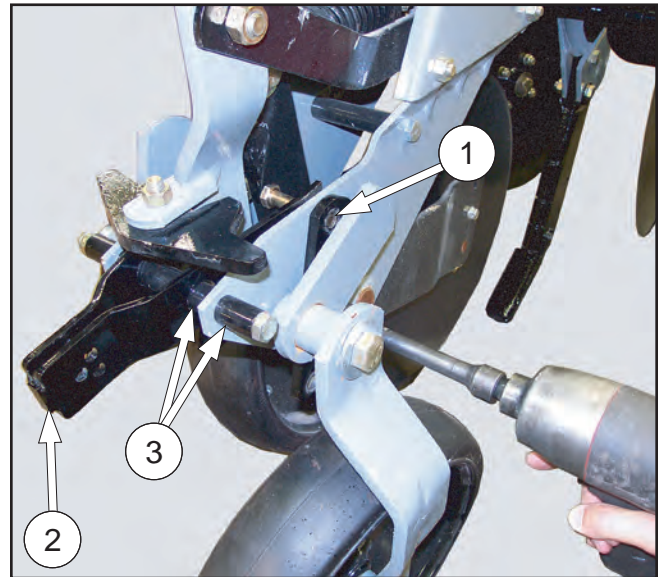


PHOTO NO. DCP0450A

Remove left and right gauge wheel rear stop (Arrow 1). The gauge wheel arm will hang down as shown in photo. The longer stop will not be used. Install top anchor plate weldment (Arrow 2) using original bolts and spacers (Arrow 3).

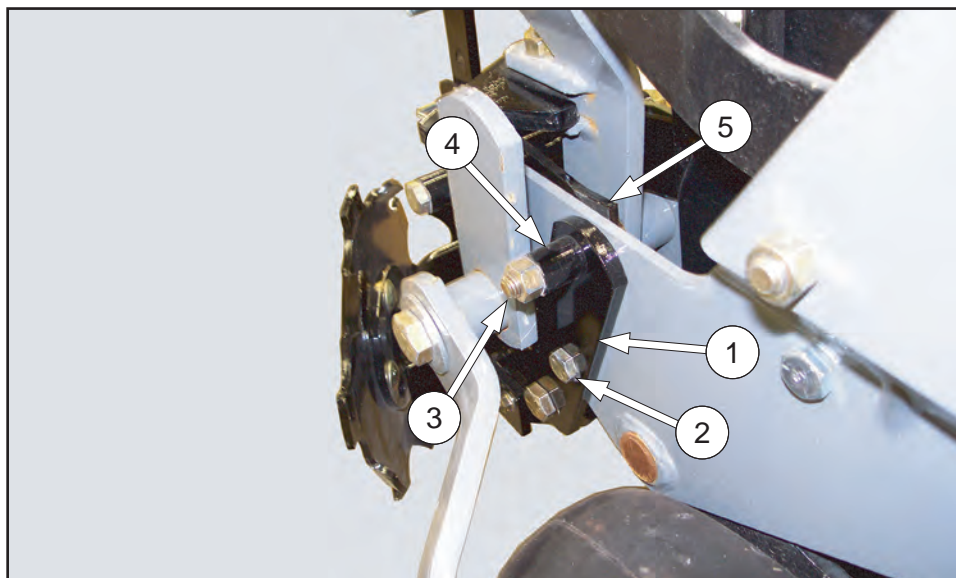


PHOTO NO. DCP0403A

Install two mount straps (Arrow 1) using one 1/2 x 6 hex bolt (Arrow 2) with 1/2 locking nut. Install one 1/2 x 2 1/2 hex bolt (Arrow 3) on left and 1/2 x 3 hex bolt on right.

Use shorter 1" stops (Arrow 4) and 1/2 locking nuts. Note: Right side use the shorter 5/16 long stop on the inside of mast plates. Bolts must enter from inside of top anchor plate (Arrow 5) on both sides.

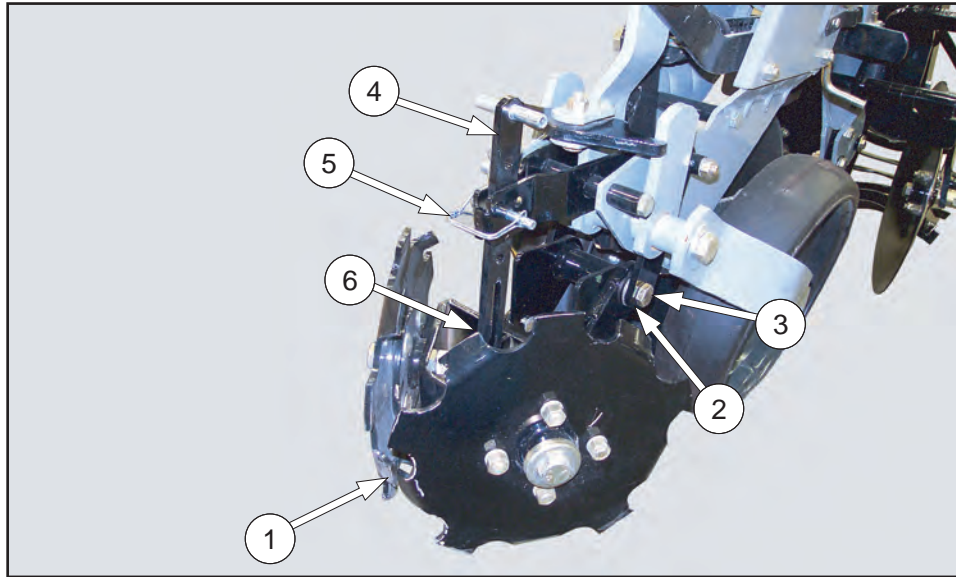


PHOTO NO. DCP0405A

Reinstall the row cleaner assembly (Arrow 1) on the inside of mount straps (Arrow 2) using 5/8 x 6 hex bolt (Arrow 3) with 5/8 lock nut.

Reinstall pull strap (Arrow 4) **Note:** Curved slotted end to be facing forward (Arrow 6) using safety snap pin at top (Arrow 5) and 3/8 x 1 1/2 hex bolt with 3/8 lock nut at bottom.

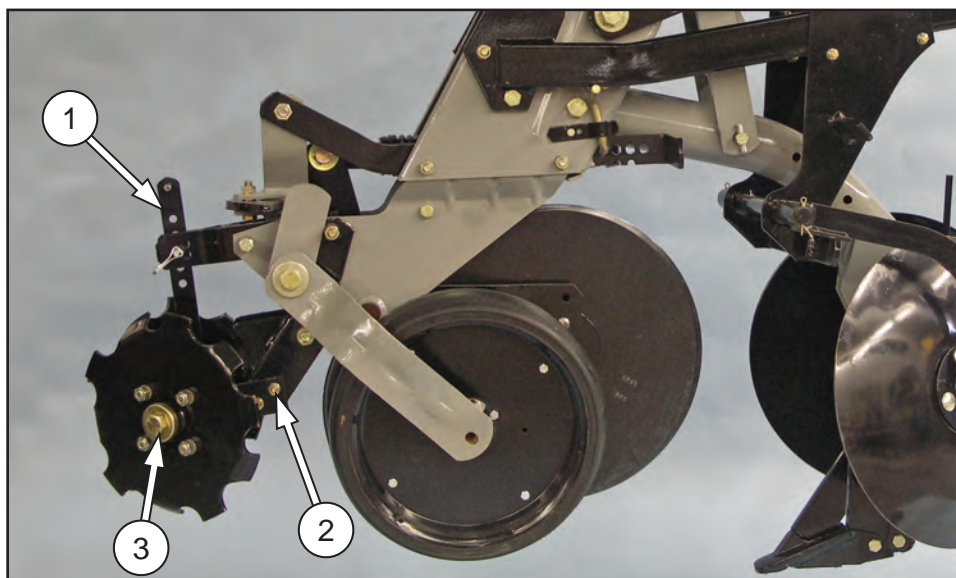


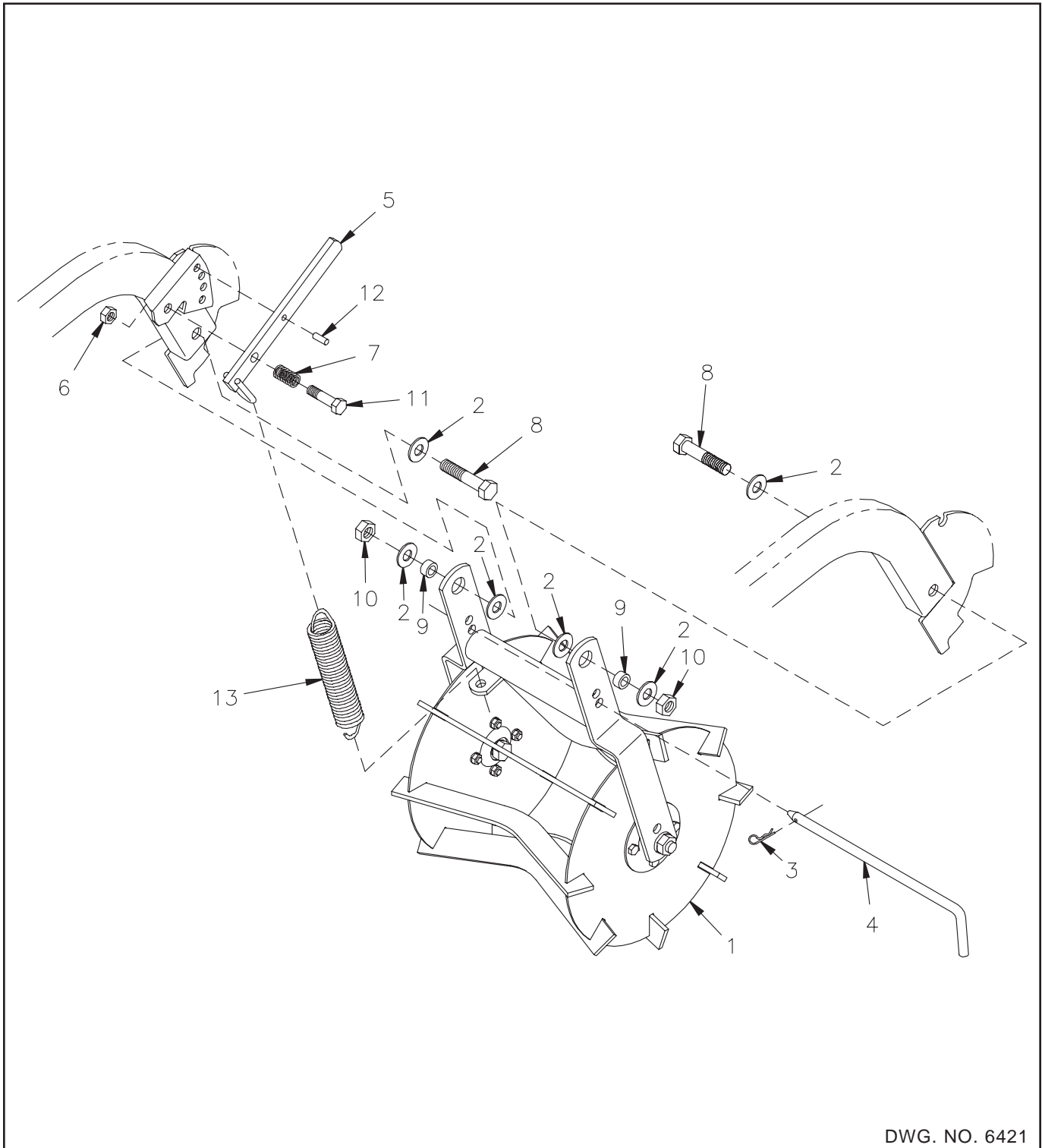
PHOTO NO. PICT0001XC

Adjustment: The height position on the pull strap (Arrow 1) will be determined in the field, in working position. The slot in the pull strap will allow the row cleaner to float in firm ground, and will carry the row cleaner in soft ground.

The angle of cleaning disc assembly can be changed at (Arrow 2). One disc assembly (Arrow 3) can be installed in front of the others. Always balance out the number of right and left hand row units when one disc is moved forward.

For additional adjustment see page 12.

Optional 81005899 Rolling Basket Assembly



DWG. NO. 6421

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1		Rolling Basket Sub-Assembly	1	8	950-001-141	Hex Head Cap Screw 5/8-11 x 3 Gr. 5	2
2	952-002-007	Flat Washer 5/8 Inch	6	9	81005928	Sleeve Bearing	2
3	953-005-003	Cotter Hair Pin .148 x 2 3/4	1	10	951-005-044	Lock Nut 5/8-11 2-Way	2
4	81005931	Pin	1	11	950-001-112	Hex Head Cap Screw 1/2-13 x 2 Gr. 5	1
5	81005929	Handle Weldment	1	12	953-003-013	Slotted Spring Pin 5/16 x 7/8 Zinc Plated	1
6	10304	Lock Nut 1/2-13	1	13	805-003-214	Spring	1
7	80305696	Compression Spring	1				

Installing Rolling Basket Assembly

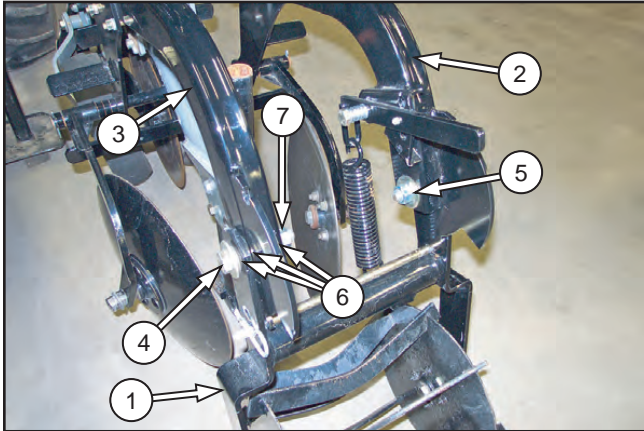


PHOTO NO. DCP2205A

Install rolling basket assembly (Arrow 1) on the outside of the right and left berming disc mount arms (Arrow 2 & 3), using (2) 5/8" x 3" hex bolts (Arrow 4 & 5).

Note: The position of the (3) 5/8" flat washers (Arrow 6) and the sleeve bearing will be inside flat bar on each side. Secure with (2) 5/8" hex lock nuts (Arrow 7).

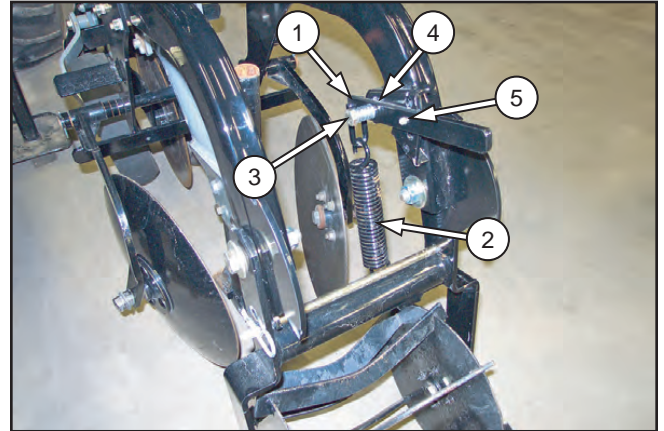


PHOTO NO. DCP2205B

Attach handle (Arrow 1) into upper extension spring (Arrow 2). **Note** position of spring hook. Install 1/2" x 2" hex bolt (Arrow 3) into compression spring (Arrow 4), and then into the handle and right berming disc mount support. Secure with a 1/2" hex lock nut. Set the tension of the lock nut to insure spring pin (Arrow 5) to lock in place.

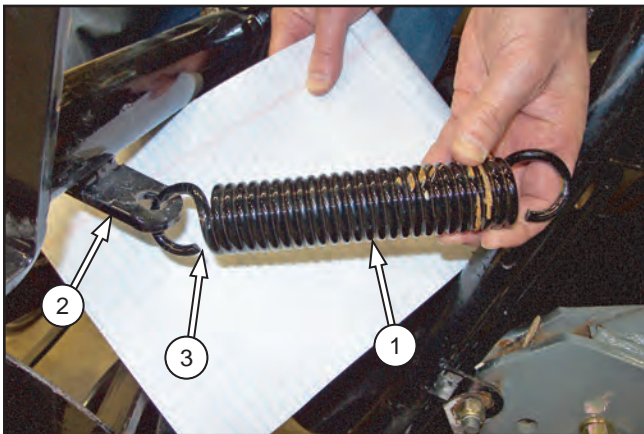


PHOTO NO. DCP2214A

Install the extension spring (Arrow 1) to the bottom anchor (Arrow 2). Note position of the open side of the spring hook (Arrow 3).

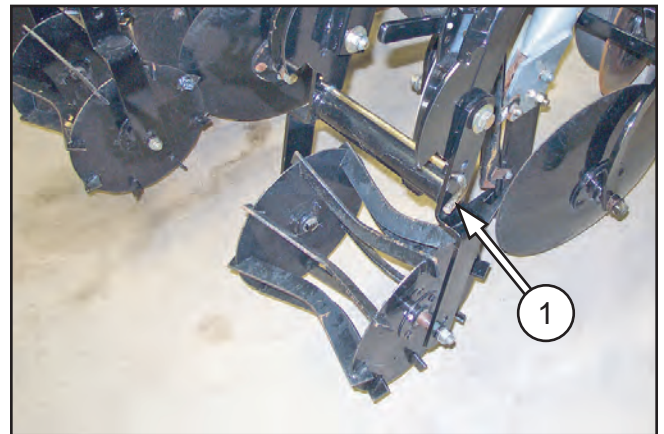
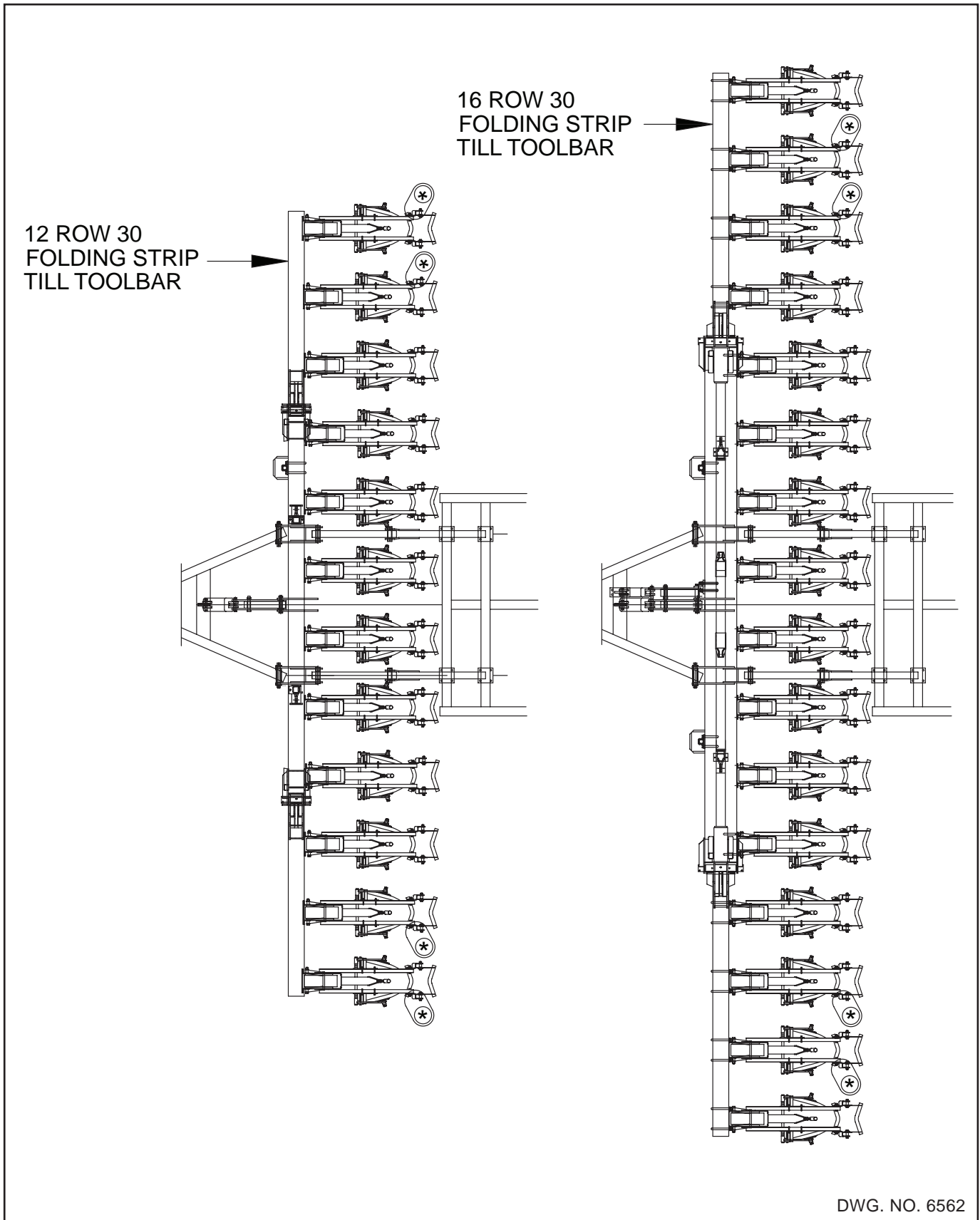


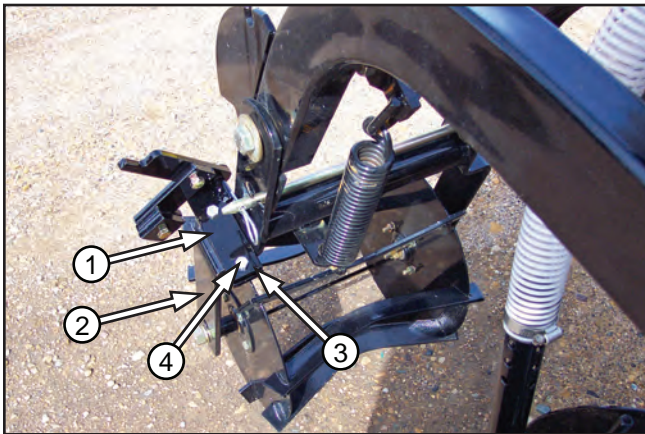
PHOTO NO. DCP2197A

Install long adjusting pin (Arrow 1). Secure with hair pin on other end. For different adjustments see page 8.

Note: For installation of rolling basket lock on folding toolbars with granular fertilizer hopper see page 38 and 39.

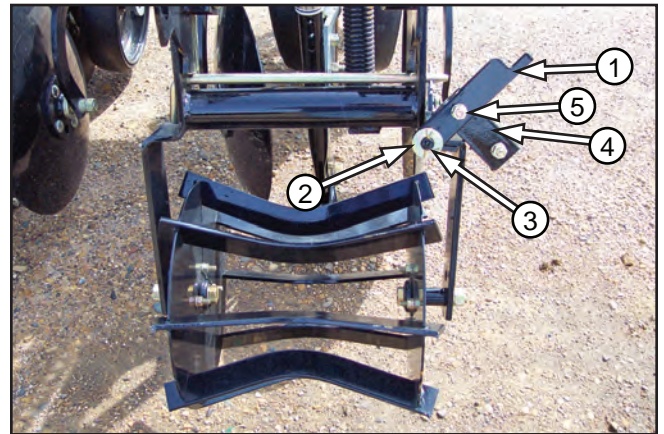
To insure that the rolling basket does not fall onto the granular fertilizer tank, roll up tarp. These locks are to be used on folding toolbars only.





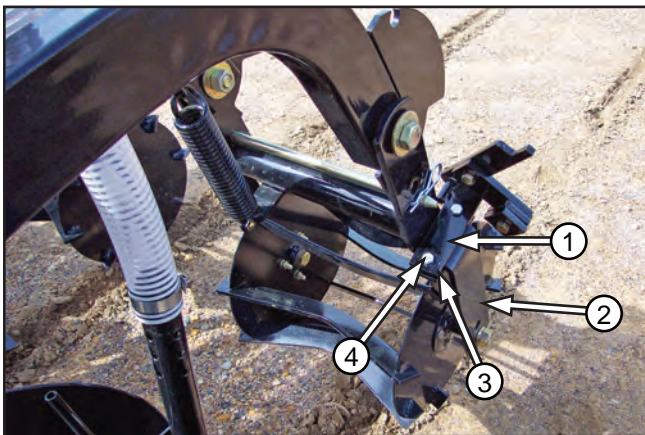
RH Side Front

PHOTO NO. DCP2602A



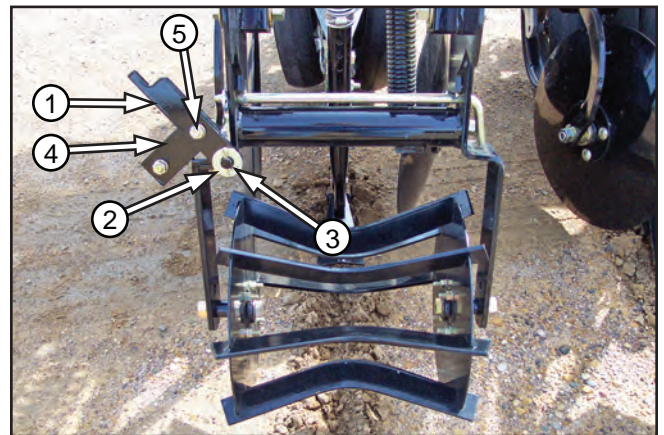
RH Side Rear

PHOTO NO. DCP2596A



LH Side Front

PHOTO NO. DCP2610A



LH Side Rear

PHOTO NO. DCP2603A

Step: 1 Install (all 4) pivot mount brackets (arrow 1) on flat surface of rolling basket support (arrow 2) using (4) clamp plates (arrow 3) with (8) hex bolts 5/16 x 1 1/4 (arrow 4), 5/16 lock washers and 5/16 hex nuts.

Step: 2 Install (4) lock plates (arrow 1) using (4) 1/2 flat washers (arrow 2) and (4) cotter pins (arrow 3). Install (4) weight supports (arrow 4) using (4) hex bolts 3/8 x 1 1/4 (arrow 5) with 3/8 lock washers and 3/8 hex nuts.

Note: Position of notch in lock plates (arrow 1) open at top.

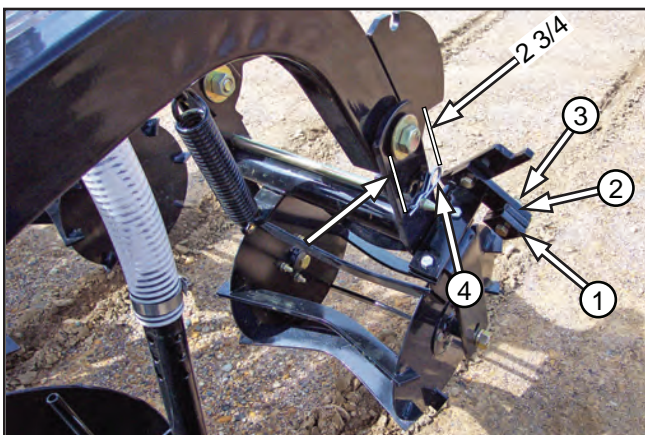


PHOTO NO. DCP2610B

Step: 3 Install (8) weights (arrow 1) (2) per each weight support (arrow 2) using (4) hex bolts 3/8 x 1 3/4 (arrow 3) with 3/8 lock washers and 3/8 hex nuts.

Note: Check stop pin (arrow 4) (photo no. DCP2610B) must be in bottom hole and hair pin is not greater than 2 3/4, so it will not interfere with gravity lock. Swing lock into place to see if it is working properly.

Optional 81005900 Granular Fertilizer Tube and Deflector

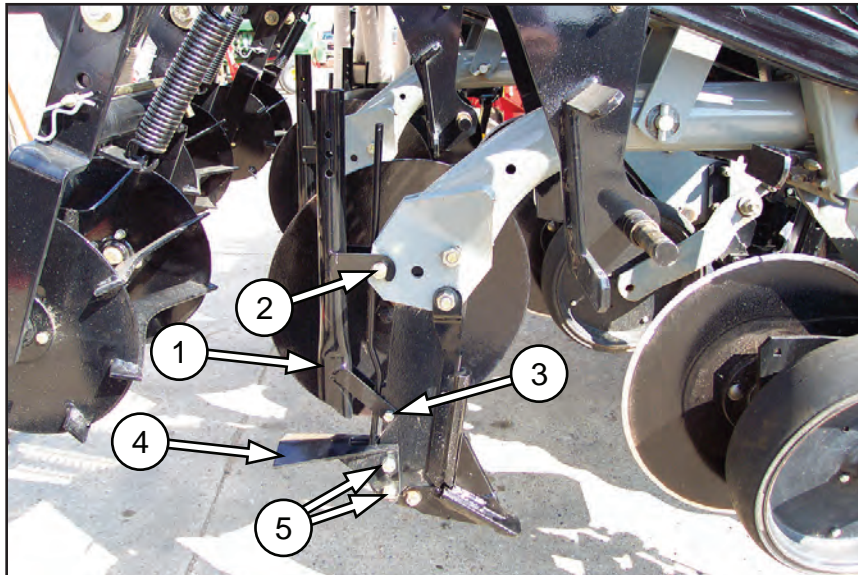
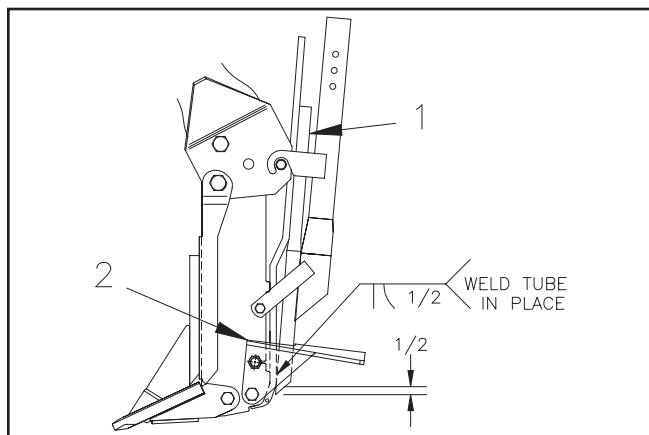


PHOTO NO. DCP2612A

Install granular fertilizer tube (Arrow 1) using one 1/2 x 2 1/2 hex bolt (Arrow 2) with two spacers and 1/2 hex lock nut, and one 3/8 x 1 1/4 hex bolt (Arrow 3) with one 3/8 hex lock nut.

Install 4" deflector plate (Arrow 4) using two 1/2 x 2 1/2 hex bolts (Arrow 5) with two 1/2 hex lock nuts.

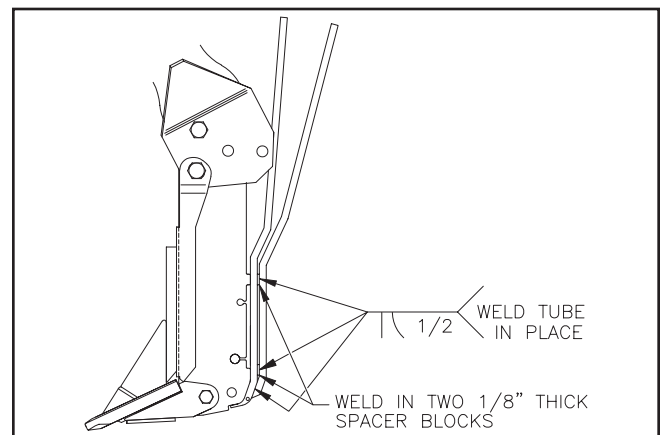
Optional 39216023 NH3 Vapor Tube



DWG. NO. 6550

To install 3/4 vapor tube (Arrow 1) remove deflector bracket (Arrow 2) first. Then weld tube in place, hold the 1/2" dimension at bottom. Reinstall deflector bracket.

Optional 81006064 Stainless Steel Fertilizer Tube



DWG. NO. 6551

When using anhydrous ammonia and liquid fertilizer, the extra fertilizer tube, is needed. First weld in two spacer blocks 5/8 x 5/8 x 1/8 thick (spacers are not provided), in place as shown in drawing.

Second weld stainless steel fertilizer tube in place as shown in drawing.

Optional 81005608 Auxiliary Spring Kit

Add Third Spring To One 6000 Strip-Till Row Unit

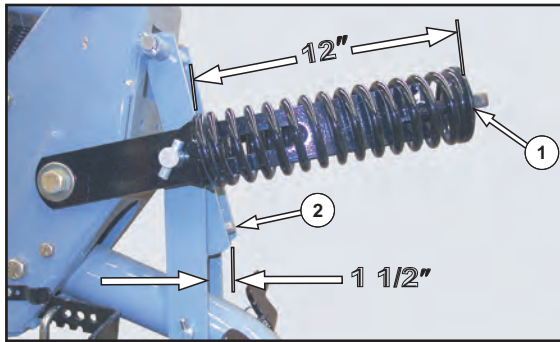


PHOTO NO. DCP0447B

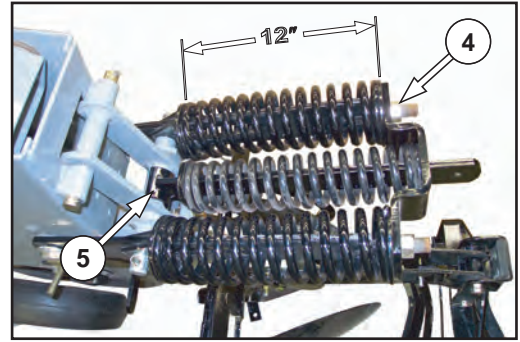
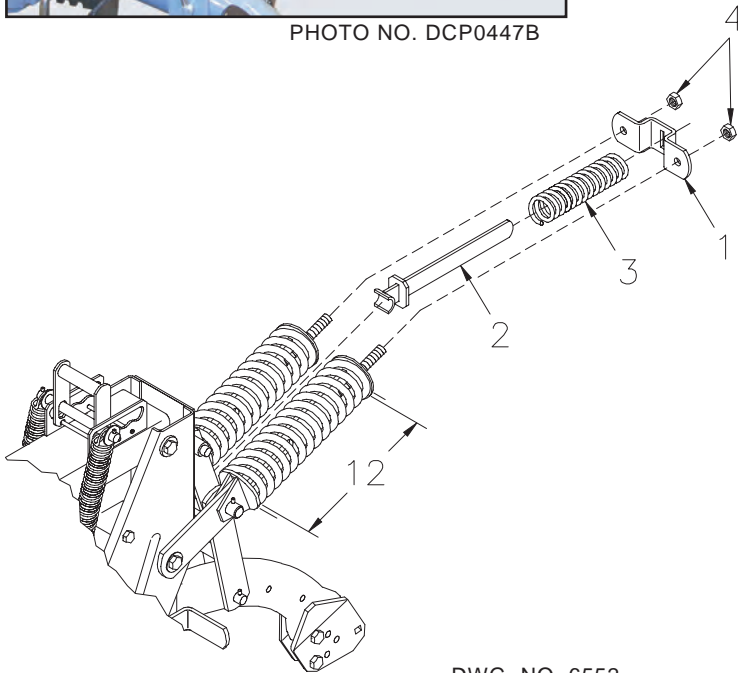


PHOTO NO. DCP1356



DWG. NO. 6552

Step 1

Before installing third spring, remove tension on the two standard springs by turning 3/4 hex nut (arrow 1). Readjust the toggle dimension to 1 1/2" as shown by turning the 3/4 hex bolt and securing with 3/4 hex nut (arrow 2). Re-tension the two standard springs down to 12" as shown in Photo DCP0447B.

Step 2

Install strap weldment (arrow 2) onto linkage pivot (arrow 5) see Photo DCP1356.

Step 3

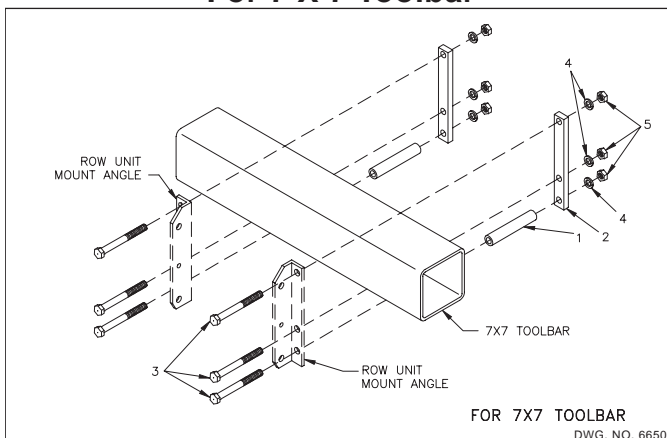
Install compression spring (arrow 3) and upper strap (arrow 1) over strap weldment (arrow 2), and the (2) 3/4" threaded rods in DWG. 6062.

Step 4

Install the (2) new 3/4-10 2-way lock nuts (arrow 4) threading them down so both ends of upper straps are tight against the spring washer, as shown in photo DCP1365.

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005671	Upper Strap		3	25011324	Compression Spring	1
2	81005670	Strap Weldment		4	951-005-037	Lock Nut 3/4-10, 2-Way	2

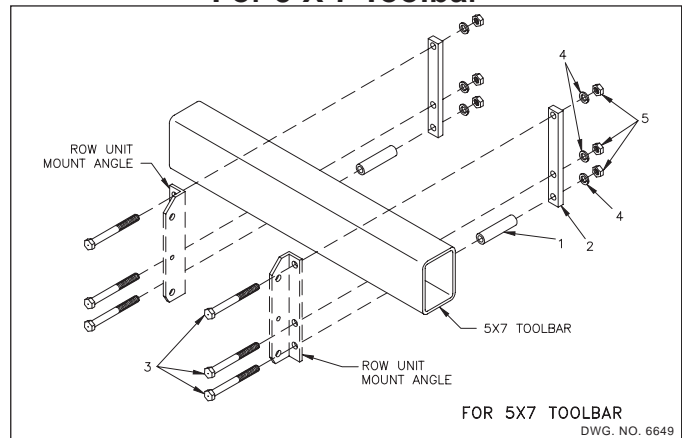
81006170 1 Row Bolt & Mount Bar Kit For 7 X 7 Toolbar



FOR 7X7 TOOLBAR

DWG. NO. 6650

81006171 1 Row Bolt & Mount Bar Kit For 5 X 7 Toolbar



FOR 5X7 TOOLBAR

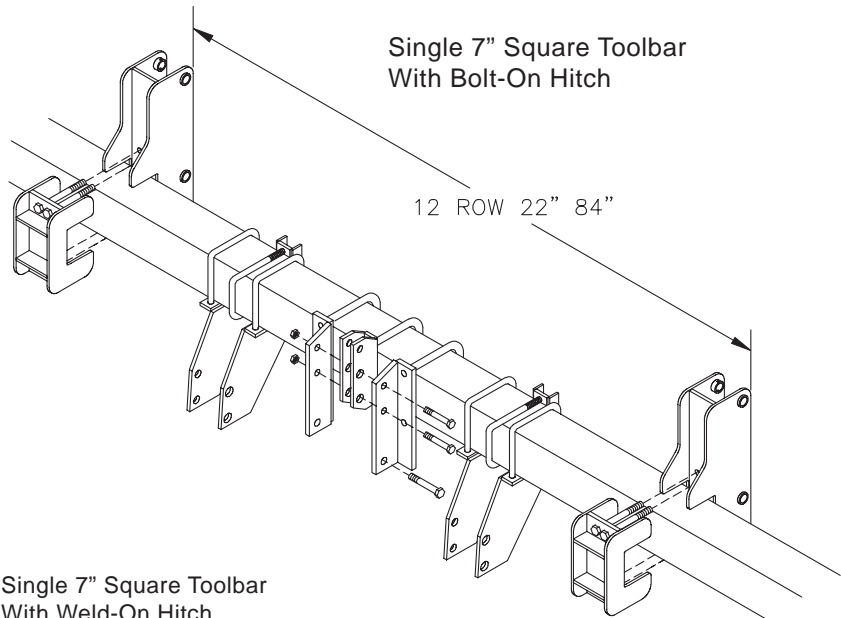
DWG. NO. 6649

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81006169	Spacer Tube 7"	2	4	952-001-006	Lock Washer 3/4 Inch	6
2	81006167	Mount Bar	2	5	951-001-009	Hex Nut 3/4-10	6
3	950-001-151	Hex Head Cap Screw 3/4-10 x 9 Gr. 5	6				

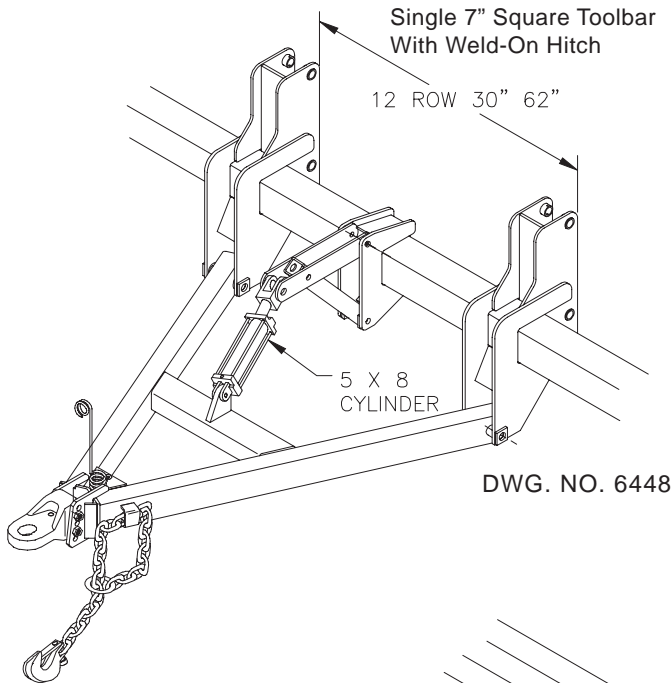
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81006168	Spacer Tube 5"	2	4	952-001-006	Lock Washer 3/4 Inch	6
2	81006167	Mount Bar	2	5	951-001-009	Hex Nut 3/4-10	6
3	950-001-253	Hex Head Cap Screw 3/4-10 x 7 Gr. 5	6				

Mast Dimension Single 7" Square Toolbar

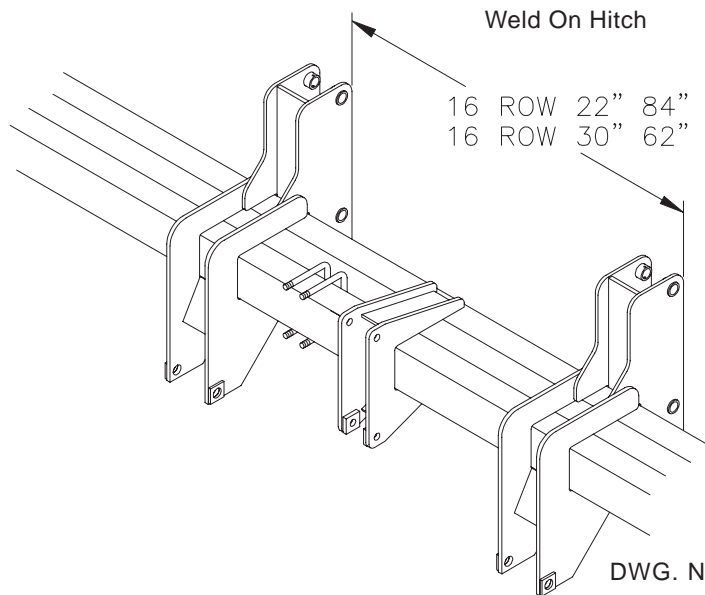
Step 7: At this time having toolbar with it's trail hitch in place, 5 x 8 cylinder and lift link assembled. Also the Strip-Till row units mounted on the toolbar, now recheck the front lift mast width dimension for size of Strip-Till model.



DWG. NO. 6447



DWG. NO. 6448



DWG. NO. 6449

Install Rear Mast, Parallel Links And Plumbing

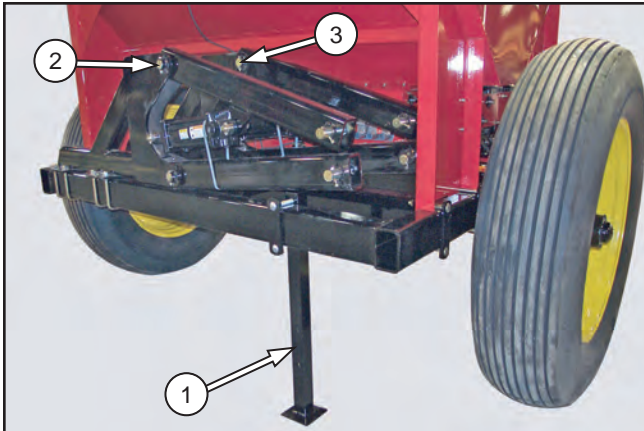


PHOTO NO. DCP0950A

STEP 8: With trailer stands both front and rear (Arrow 1) down on the ground. Carefully lift off rear mast with parallel links (Arrow 2) and (Arrow 3) from trailer frame.

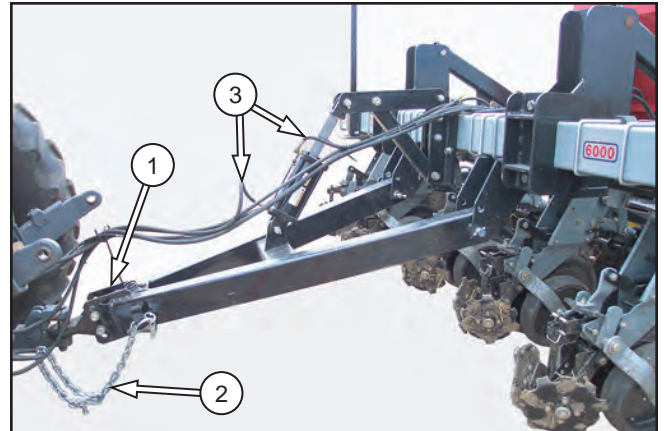


PHOTO NO. DCP0501A

STEP 10: Attach tractor to trail hitch (Arrow 1) with safety chain (Arrow 2). Install lift plumbing (Arrow 3). See plumbing diagram (see list below).

Single Compartment Granular Fertilizer Tank Or Liquid Tank

- 12 row 22 Rigid Toolbar page 44
- 12 row 30 Folding Toolbar page 45
- 16 row 22 Folding Toolbar page 46
- 16 row 30 Folding Toolbar page 46

40/60 Split Granular Fertilizer Tank

- 12 Row 30 Folding Toolbar page 48 and 49
- 16 Row 30 Folding Toolbar page 50 and 46

FOLDING TOOLBAR ONLY

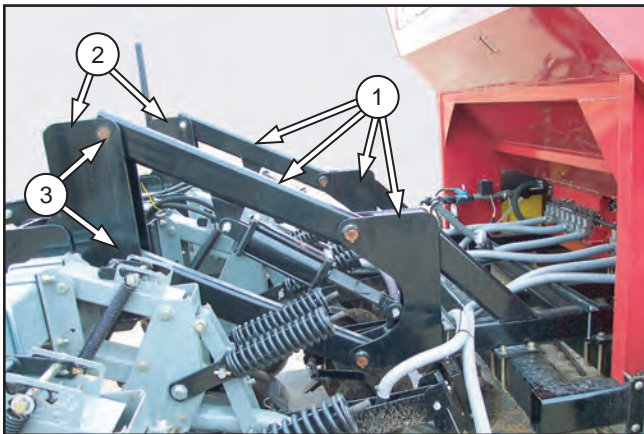


PHOTO NO. DCP0524A

STEP 9: Install rear mast with parallel links (Arrow 1) into front mount weldment (Arrow 2),

NOTE: 4 3/4 x 8 cylinder, has a 1 1/2" diameter piston rod (part number 80305385) that will be on right hand side.

4 1/2" x 8" cylinder, has a 2" diameter piston rod (part number 80305384) that will be on left hand side.

Also Note: Fertilizer trailer will not be attached to the two toolbar lift assemblies at this time.

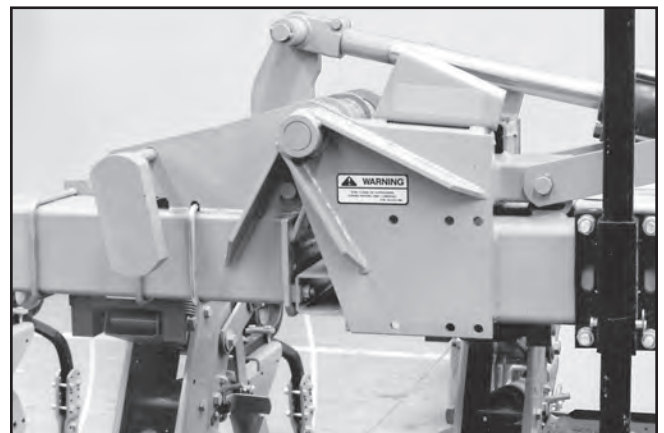
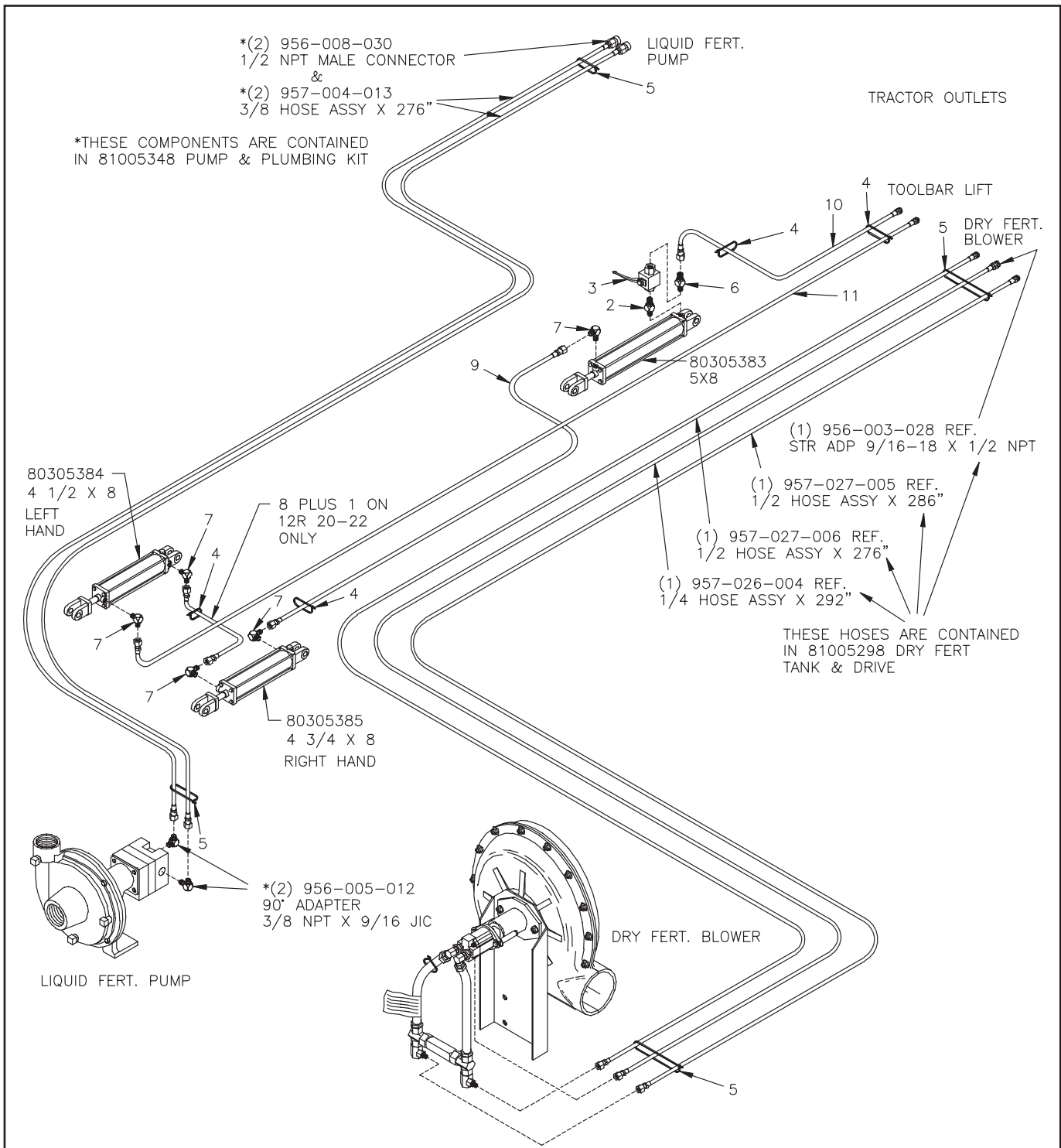


PHOTO NO. 3317

See assembly of toolbar wing lock page 53.

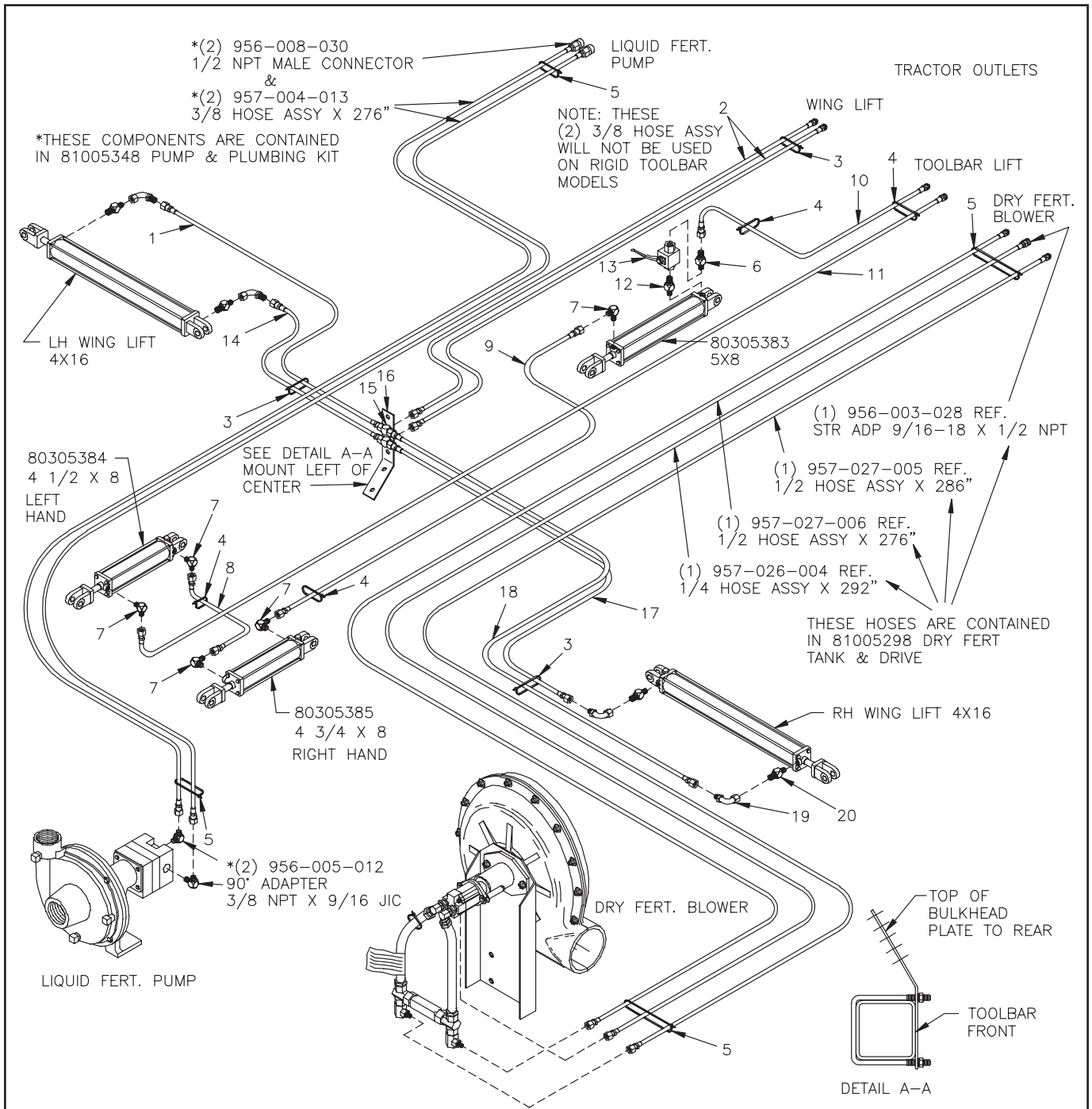
12 Row 22 Strip-Till Toolbar/Fertilizer Cart Hydraulic Plumbing



DWG. NO. 6512

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	957-008-004	Hose Assembly 3/8 x 30"	1	7	956-005-001	Elbow 90°	5
2	956-003-029	Straight Adapter 3/4 ORB To 3/4 ORB	1	8	957-001-054	Hose Assembly 3/8 x 120"	1
3	85501666	Ball Valve	1	9	957-001-057	Hose Assembly 3/8 x 86"	1
4	921-001-488	Yellow Cable Tie	4	10	957-028-007	Hose Assembly 3/8 x 94"	1
5	921-001-489	Blue Cable Tie	2	11	957-028-008	Hose Assembly 3/8 x 206"	1
6	956-003-001	Straight Adapter 9/16 To 3/4 ORB	1				

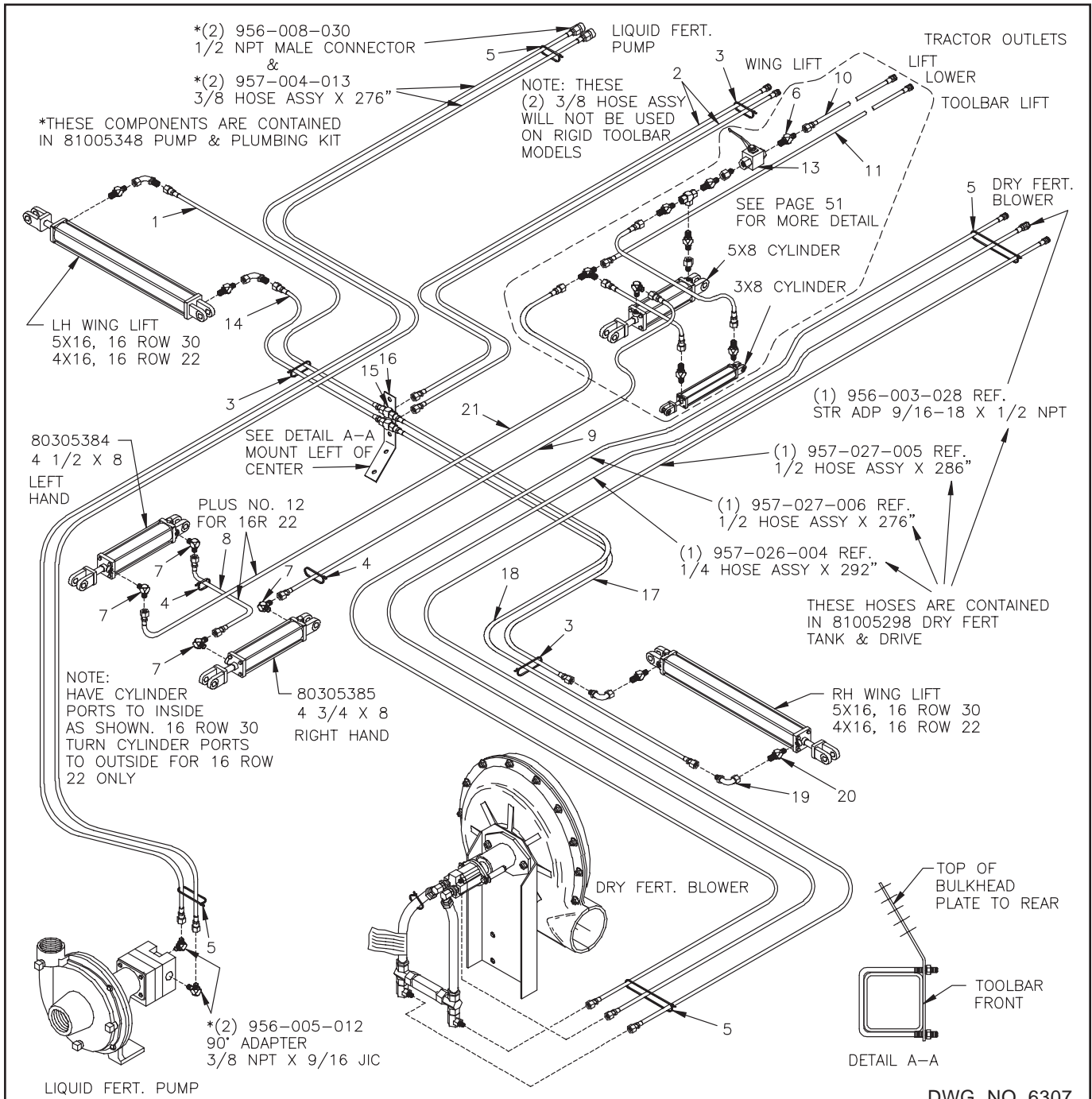
12 Row 30 Strip-Till Toolbar/Fertilizer Cart Hydraulic Plumbing



DWG. NO. 6309

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	957-001-061	Hose Assembly 3/8 x 56"	1	11	957-028-008	Hose Assembly 3/8 x 206"	1
2	957-028-009	Hose Assembly 3/8 x 132"	2	12	956-003-029	Straight Adapter 3/4 ORB To 3/4 ORB	1
3	921-001-487	Red Cable Tie	3	13	85501666	Ball Valve	1
4	921-001-488	Yellow Cable Tie	4	14	957-001-060	Hose Assembly 3/8 x 44"	1
5	921-001-489	Blue Cable Tie	2	15	956-007-003	Tee Fitting	2
6	956-003-001	Straight Adapter 9/16 To 3/4 ORB	1	16	805-001-784	30° Bulkhead Plate	1
7	956-005-001	Elbow 90° Fitting	5	17	957-001-014	Hose Assembly 3/8 x 60"	1
8	957-001-054	Hose Assembly 3/8 x 120"	1	18	957-001-017	Hose Assembly 3/8 x 72"	1
9	957-001-057	Hose Assembly 3/8 x 86"	1	19	956-005-002	Elbow 90° Fitting	4
10	957-028-007	Hose Assembly 3/8 x 94"	1	20	956-008-024	Straight Restrictor Fitting	4

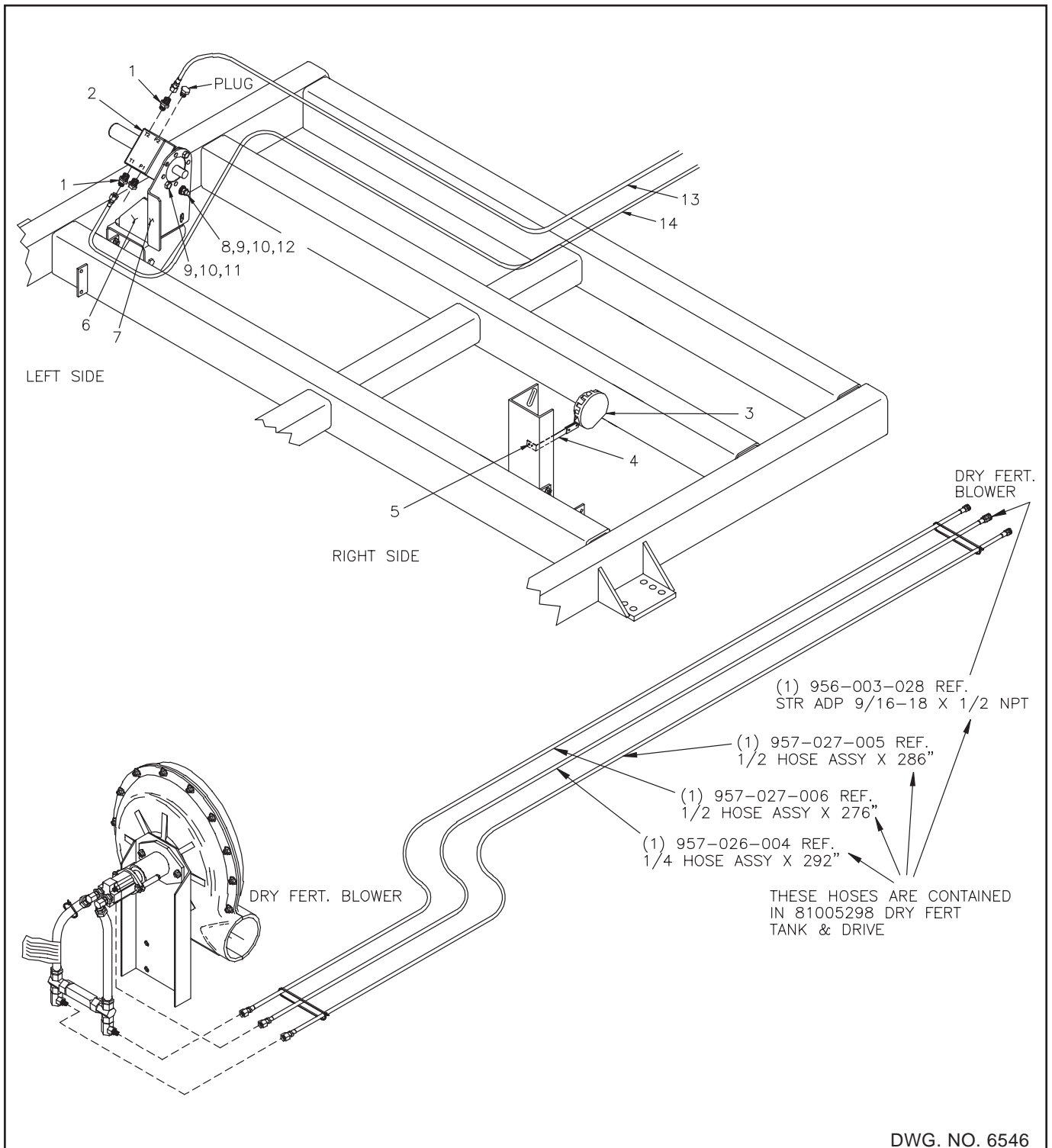
16 Row 22, 16 Row 30 Strip-Till Toolbar/Fertilizer Cart Hydraulic Plumbing



DWG. NO. 6307

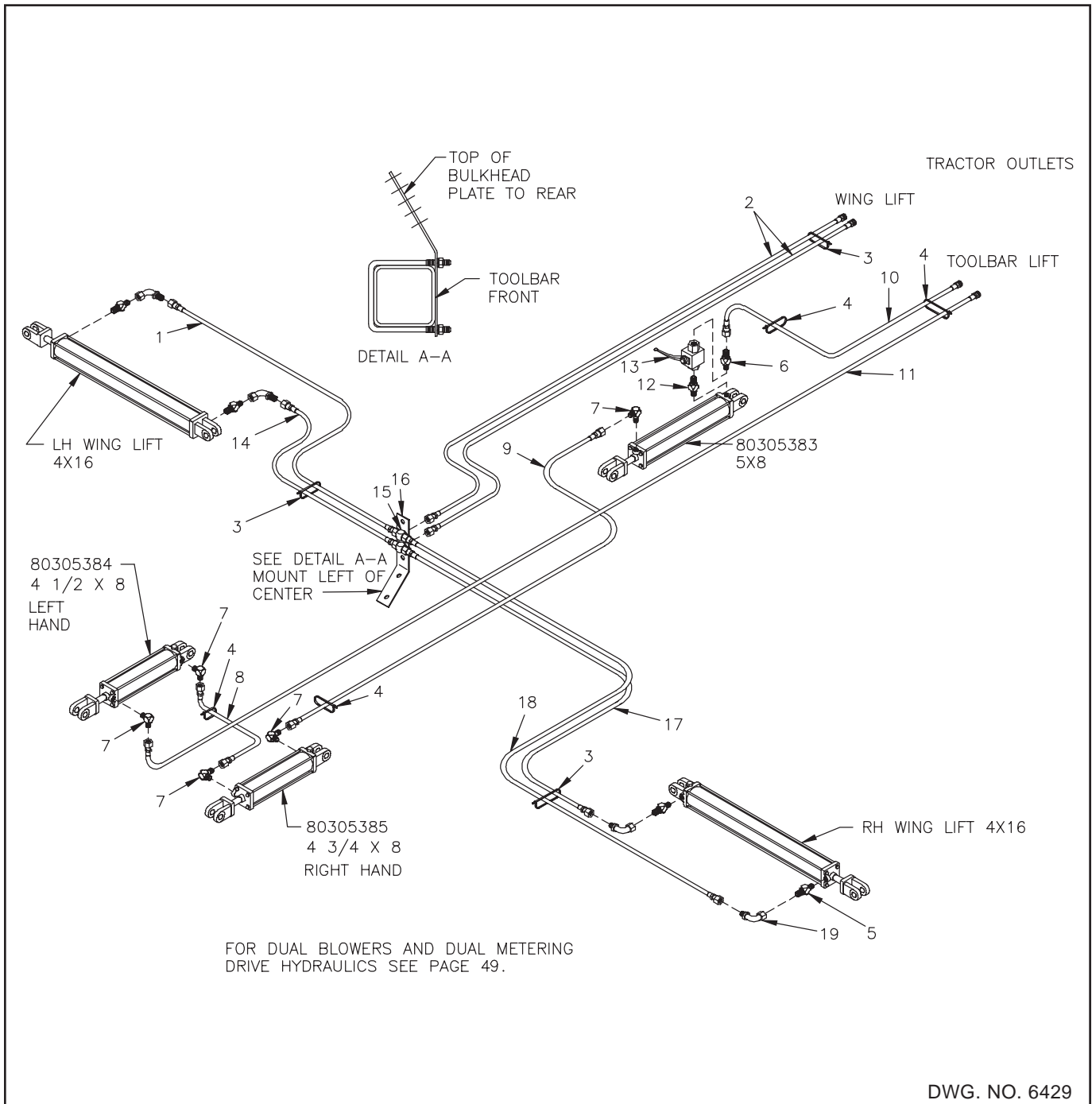
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	957-001-058	Hose Assembly 3/8 x 82"	1	12	957-008-004	Hose Assembly 3/8 x 30" (16 Row 22 Only)	1
2	957-028-009	Hose Assembly 3/8 x 132"	2	13	85501666	Ball Valve	1
3	921-001-487	Red Cable Tie	3	14	957-001-015	Hose Assembly 3/8 x 68"	2
4	921-001-488	Yellow Cable Tie	4	15	956-007-003	Tee Fitting	1
5	921-001-489	Blue Cable Tie	2	16	805-001-784	30° Bulkhead Plate	1
6	956-003-001	Straight Adapter 9/16 To 3/4 ORB	1	17	957-001-107	Hose Assembly 3/8 x 89"	1
7	956-005-001	Elbow 90° Fitting	5	18	957-001-021	Hose Assembly 3/8 x 102"	4
8	957-001-054	Hose Assembly 3/8 x 120"	1	19	956-005-002	Elbow 90° Fitting	4
9	957-001-056	Hose Assembly 3/8 x 108"	1	20	956-008-025	Straight Restrictor Fitting For 5 Cylinder	1
10	957-028-007	Hose Assembly 3/8 x 94"	1		956-008-024	Straight Restrictor Fitting For 4 Cylinder	4
11	957-028-010	Hose Assembly 3/8 x 106"	1	21	957-001-057	Hose Assembly 3/8 x 86"	1

Single Variable Drive Fertilizer Cart Hydraulic Plumbing



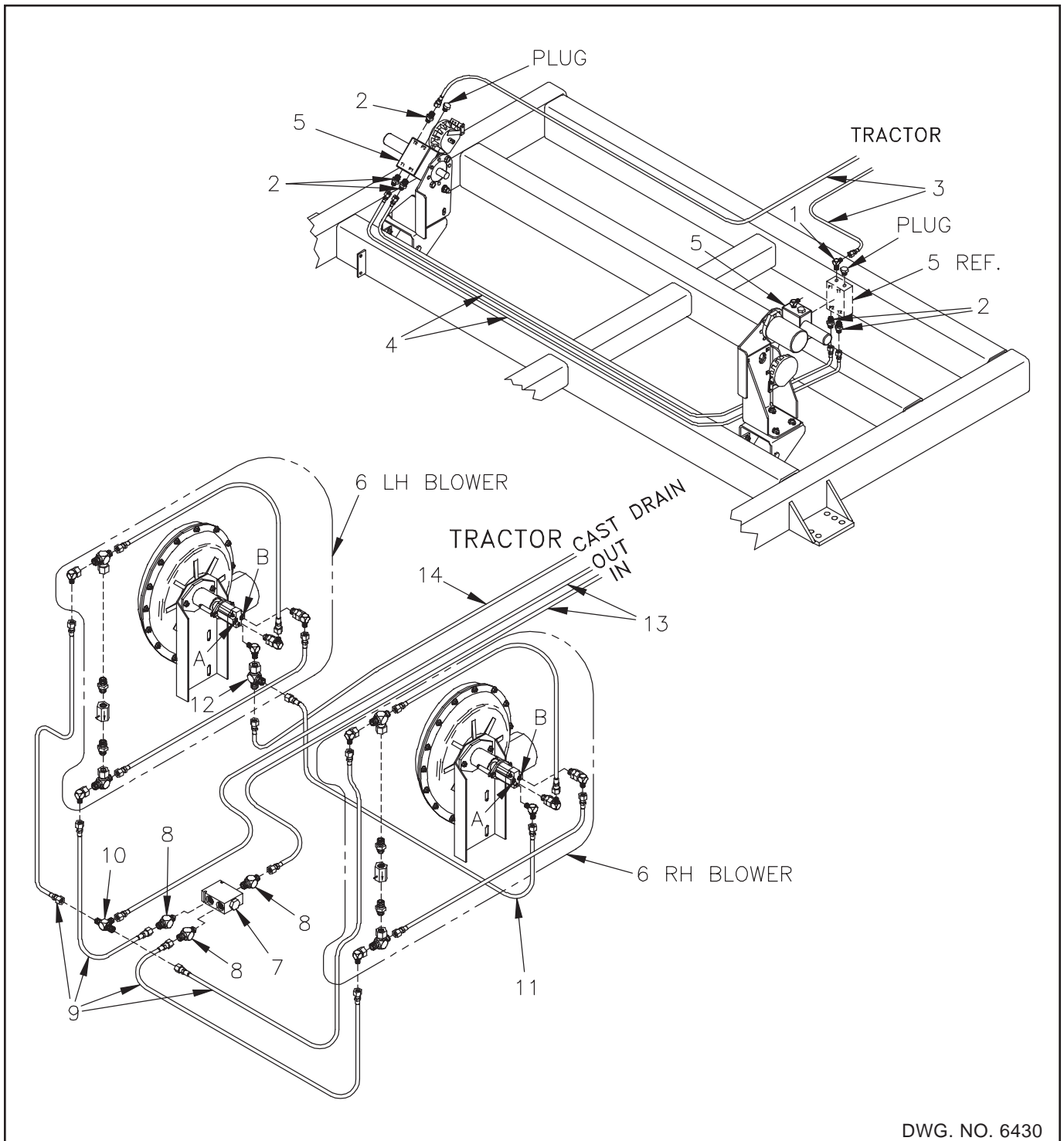
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	956-003-031	Straight Fitting 9/16 x 7/8	2	8	950-003-019	Carriage Bolt 1/2-13 x 1 1/2 Gr. 5	8
2	81006004	HD 4180 Hydraulic Drive W/Valve	1	9	952-001-004	Lock Washer 1/2	10
3	81006003	Application Rate Sensor	1	10	951-001-007	Hex Nut 1/2-13	10
4	81006058	L Bracket	1	11	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	2
5	951-005-010	Lock Nut 2-Way #10-32	1	12	952-002-005	Flat Washer 1/2 WRT	8
6	81006001	LH Mounting Bracket	1	13	957-002-012	Hose Assembly 3/8 x 282"	1
7	81005998	LH Motor Mounting Bracket	1	14	957-001-017	Hose Assembly 3/8 x 294"	1

12 Row 30 Strip-Till Toolbar/40/60 Split Fertilizer Cart Hydraulic Plumbing



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	957-001-061	Hose Assembly 3/8 x 56"	1	11	957-028-008	Hose Assembly 3/8 x 206"	1
2	957-028-009	Hose Assembly 3/8 x 132"	2	12	956-003-029	Straight Adapter 3/4 ORB To 3/4 ORB	1
3	921-001-487	Red Cable Tie	3	13	85501666	Ball Valve	1
4	921-001-488	Yellow Cable Tie	4	14	957-001-060	Hose Assembly 3/8 x 44"	1
5	956-008-024	Stir Restrictor Fitting	4	15	956-007-003	Tee	2
6	956-003-001	Straight Adapter 9/16 To 3/4 ORB	1	16	805-001-784	30° Bulkhead Plate	1
7	956-005-001	90° Elbow	5	17	957-001-014	Hose Assembly 3/8 x 60"	1
8	957-001-054	Hose Assembly 3/8 x 120"	1	18	957-001-017	Hose Assembly 3/8 x 72"	1
9	957-001-057	Hose Assembly 3/8 x 86"	1	19	956-005-002	90° Elbow	4
10	957-028-007	Hose Assembly 3/8 x 94"	1				

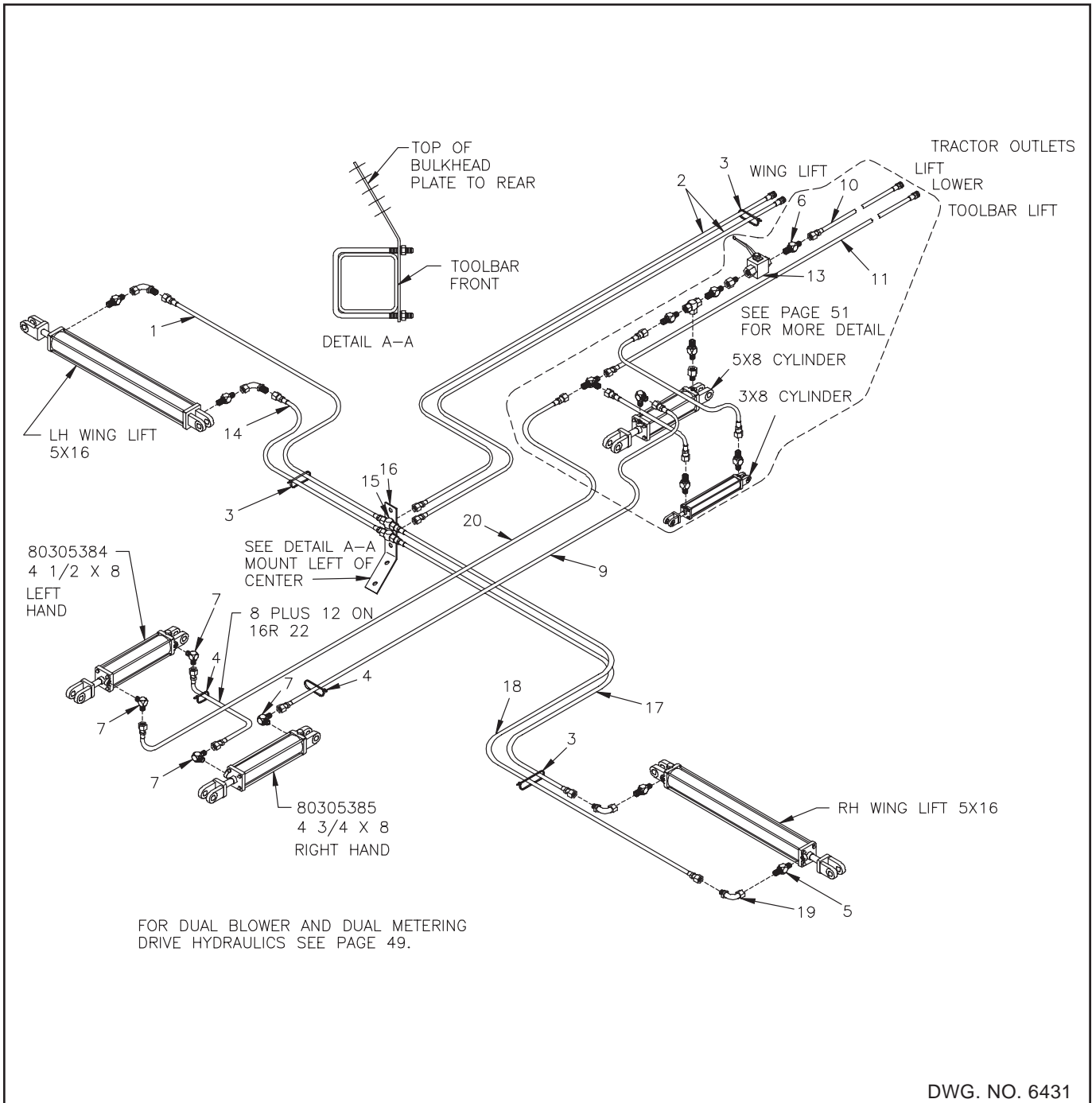
40/60 Split Dual Variable Drive Fertilizer Cart Hydraulic Plumbing



DWG. NO. 6430

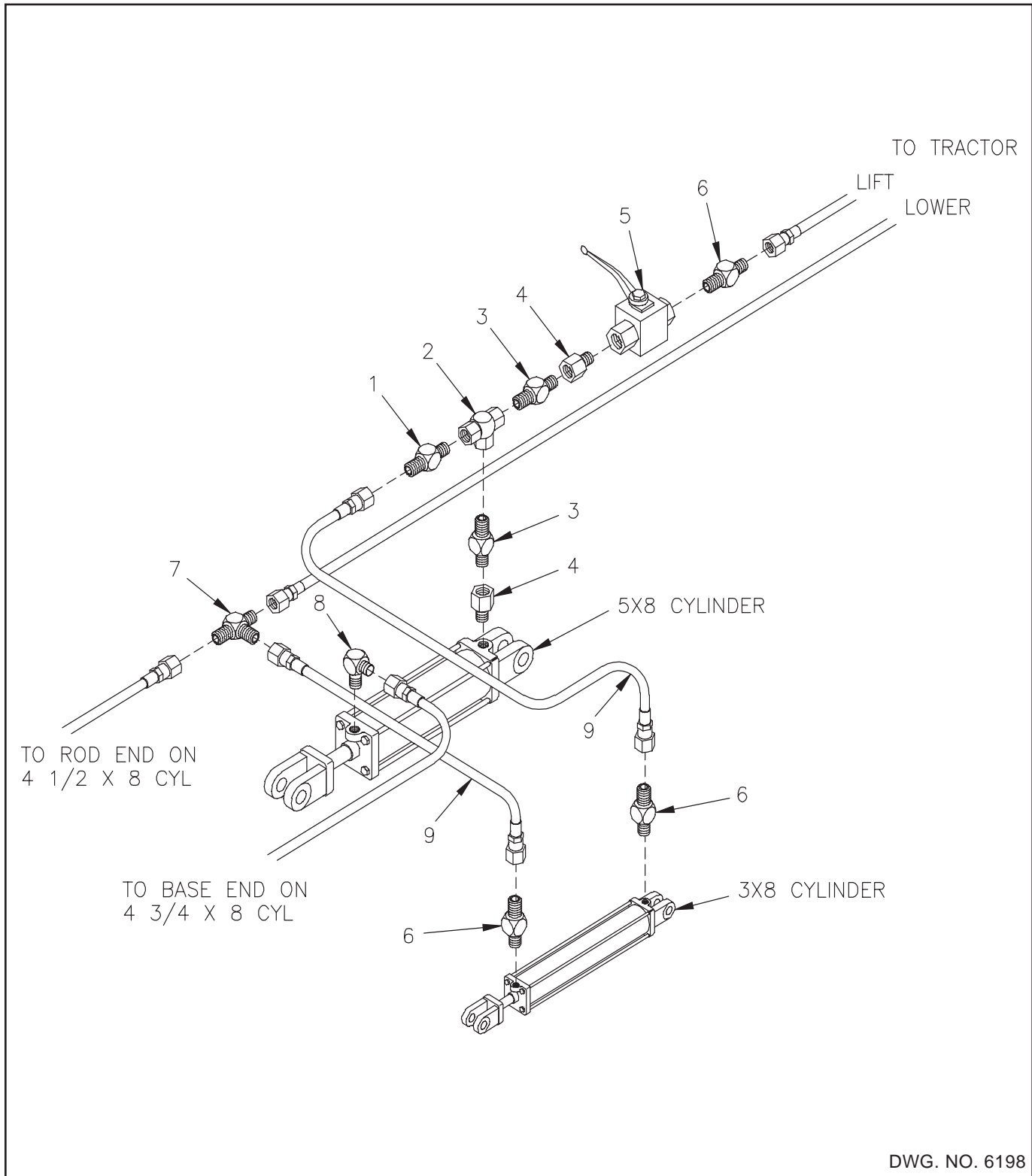
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	956-005-031	90° Elbow 9/16 To 7/8	1	11	206-01003	Straight Adapter	3
2	956-003-031	Straight Adapter 9/16 To 7/8	5	12	957-031-001	Hose Assembly 1/2 x 37"	4
3	957-002-012	Hose Assembly 3/8 x 282"	2	13	206-02503	Tee Adapter	1
4	957-001-020	Hose Assembly 3/8 x 96"	2	14	957-022-016	Hose Assembly 1/2 x 48"	1
5	81006004	HD4180 Hydraulic Drive W/Valve	2	15	956-007-010	Tee	1
6	81005299	Blower And Mount Assembly	2	16	957-030-002	Hose Assembly 3/4 x 286"	2
7	81005760	Flow Divider Valve	1	17	957-026-006	Hose Assembly 1/4 x 286"	1

16 Row 30 Strip-Till Toolbar/40/60 Split Fertilizer Cart Hydraulic Plumbing



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	957-001-058	Hose Assembly 3/8 x 82"	1	11	957-028-010	Hose Assembly 3/8 x 106"	1
2	957-028-009	Hose Assembly 3/8 x 132"	2	12	957-008-004	Hose Assembly 3/8 x 30"	1
3	921-001-487	Red Cable Tie	3	13	85501666	Ball Valve	1
4	921-001-488	Yellow Cable Tie	4	14	957-001-015	Hose Assembly 3/8 x 68"	1
5	956-008-025	Straight Restrictor Fitting	4	15	956-007-003	Tee	2
6	956-003-001	Straight Adapter 9/16 To 3/4 ORB	1	16	805-001-784	30° Bulkhead Plate	1
7	956-005-001	90° Elbow	5	17	957-001-107	Hose Assembly 3/8 x 89"	1
8	957-001-054	Hose Assembly 3/8 x 120"	1	18	957-001-021	Hose Assembly 3/8 x 102"	1
9	957-001-056	Hose Assembly 3/8 x 108"	1	19	956-005-002	90° Elbow	4
10	957-028-007	Hose Assembly 3/8 x 94"	1	20	957-001-057	Hose Assembly 3/8 x 86"	1

16 Row 30 Strip-Till 3 X 8 Cylinder Assist



DWG. NO. 6198

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	956-003-003	Straight Adapter 9/16 JIC To 1/2 NPT	1	6	956-003-001	Straight Adapter 3/4 ORB To 9/16 JIC	3
2	956-007-002	1/2 NPT Tee Fitting	1	7	956-007-016	Tee 9/16 JIC (3)	1
3	203-51201	Adapter 1/2 Close Nipple	2	8	956-005-001	90° Elbow 3/4 ORB M x 9/16-18 JIC M	1
4	203-35530	Straight Adapter 3/4-16 M To 1/2 FNPT	2	9	957-001-002	Hose Assy 3/8 x 18"	2
5	85501666	Ball Valve	1				

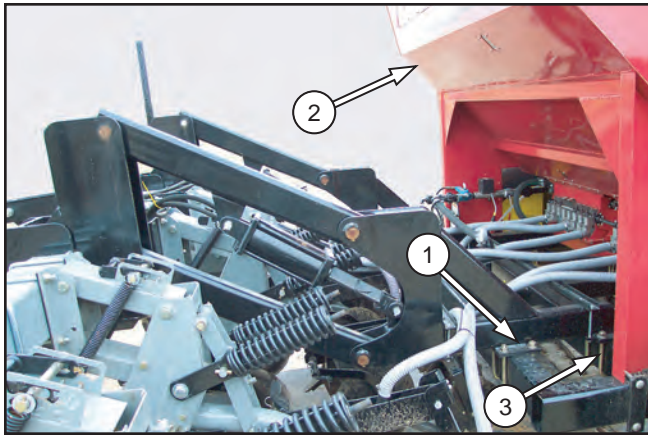


PHOTO NO. DCP0524B

STEP 11:

Plug the toolbar lift hydraulic hoses into tractor outlets. Run the hydraulic oil into toolbar lift cylinders so all cylinders are fully extended. Hold lever to remove any air in hoses and cylinders.

Reverse the oil flow to shorten the toolbar lift cylinders, so rear mast mount plates (Arrow 1) will be a minimum of 44 inches off the ground.

Roll tank and trailer (Arrow 2) into place under the rear mast mount plate (Arrow 1).

Install all eight 3/4 U-bolts (Arrow 3) with 3/4 lock washer, and 3/4 hex nuts.

NOTE:

Make sure the trailer is on center with toolbar before 3/4 U-bolts are tightened.

After trailer is secured to both rear mast weldments, the trailer stands front and rear, will be lifted and mount bolts reinstalled in the second set of holes.

STEP 12:

Finish plumbing the wing lift cylinder from the existing bulkhead plate on the toolbar to the tractor outlets.

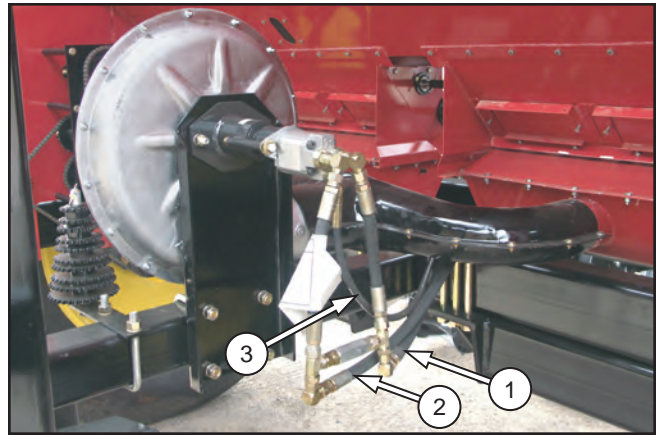


PHOTO NO. PICT0008A

STEP 13: DRY FERTILIZER

Install the two 1/2 hose assemblies (Arrow 1 & 2) and 1/4 case drain hose assembly (Arrow 3). Follow instructions given on the important decal.

IMPORTANT

HYDRAULIC CONNECTION RECOMMENDATIONS

1. SET TRACTOR HYDRAULIC FLOW CONTROL TO MINIMUM BEFORE CONNECTING HYDRAULIC LINES.
2. CONNECT BOTH 1/2 HYDRAULIC HOSES TO THE TRACTOR HYDRAULIC COUPLERS SO, THE PUMP OPERATES WITH THE CONTROL LEVER IN THE LOWER/RETRACT POSITION. THE PUMP MUST BE TURNED OFF IN THE FORWARD "FLOAT" POSITION.
3. THE 1/4 CASE DRAIN LINE MUST RETURN TO ZERO PRESSURE RETURN PORT, RETURNING OIL DIRECTLY TO THE OIL RESERVOIR.
4. REFER TO TRACTOR OPERATOR'S MANUAL FOR PROPER RETURN OIL PORT FOR THE MOTOR AND ADDITIONAL OPERATING INSTRUCTIONS OF STARTING MOTOR UP AND TURNING MOTOR OFF.

PART NO: 80306226

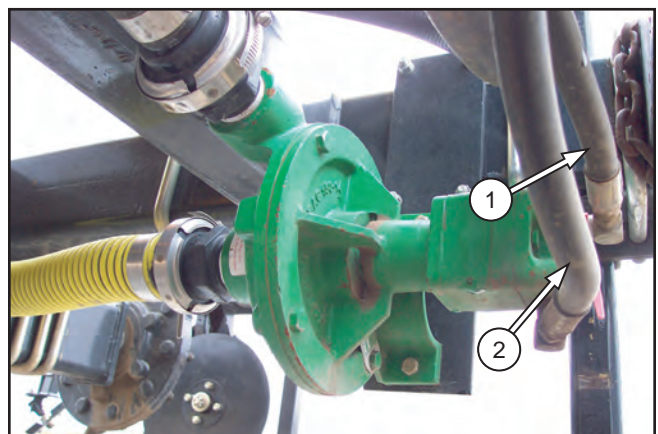


PHOTO NO. DCP0730A

STEP 13: LIQUID FERTILIZER

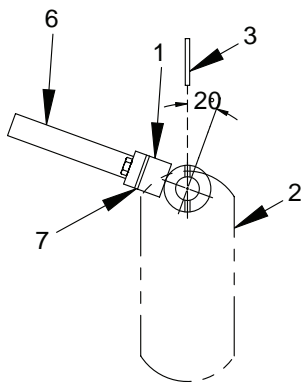
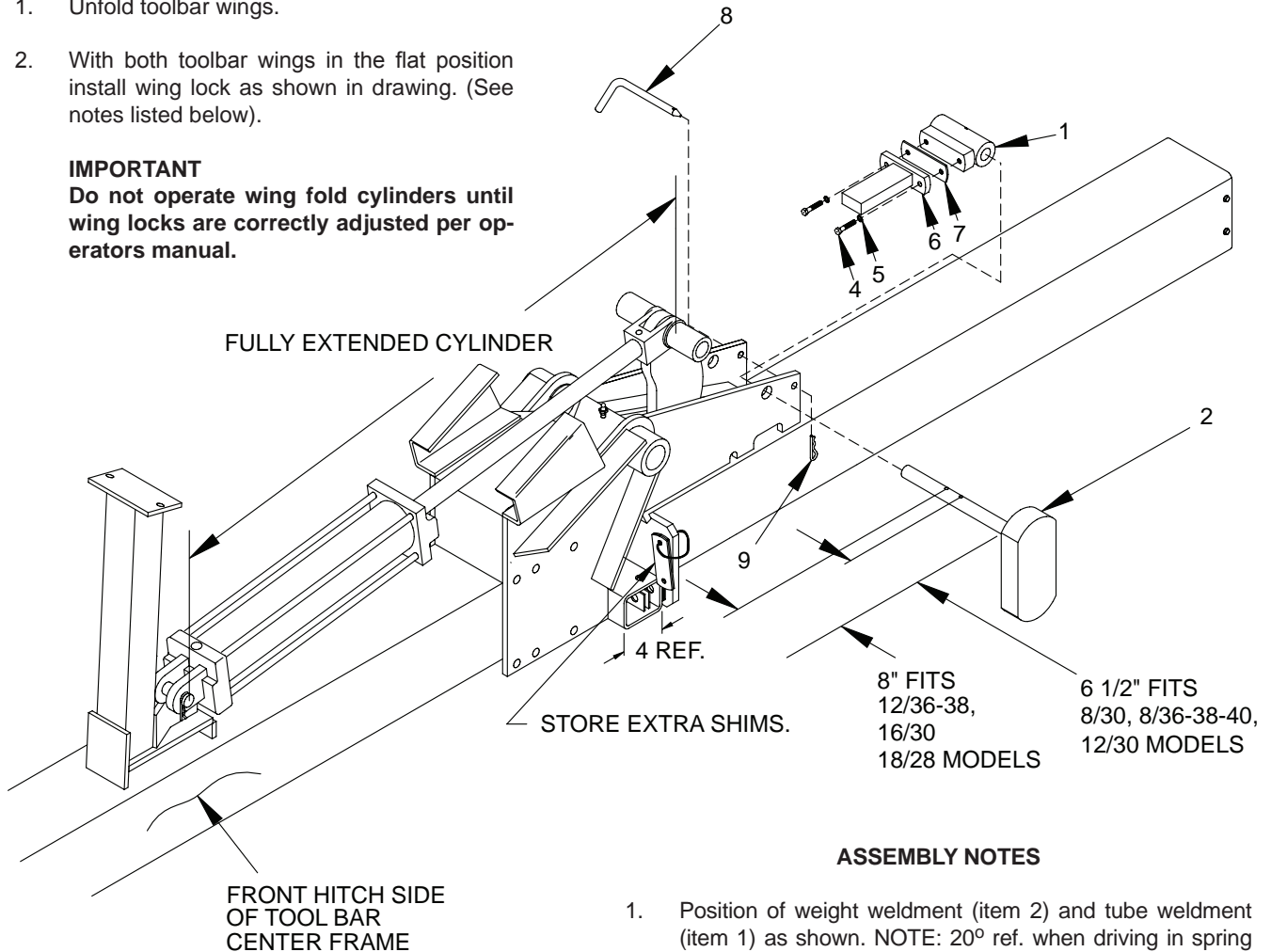
(When 81005348 pump and plumbing kit is ordered).

Install the two 3/8 hose assemblies (Arrow 1 & 2) using the 90° elbow adapter provided in kit.

Assembly Of Toolbar Wing Lock On Strip-Till Folding Toolbar

1. Unfold toolbar wings.
2. With both toolbar wings in the flat position install wing lock as shown in drawing. (See notes listed below).

IMPORTANT
Do not operate wing fold cylinders until wing locks are correctly adjusted per operators manual.



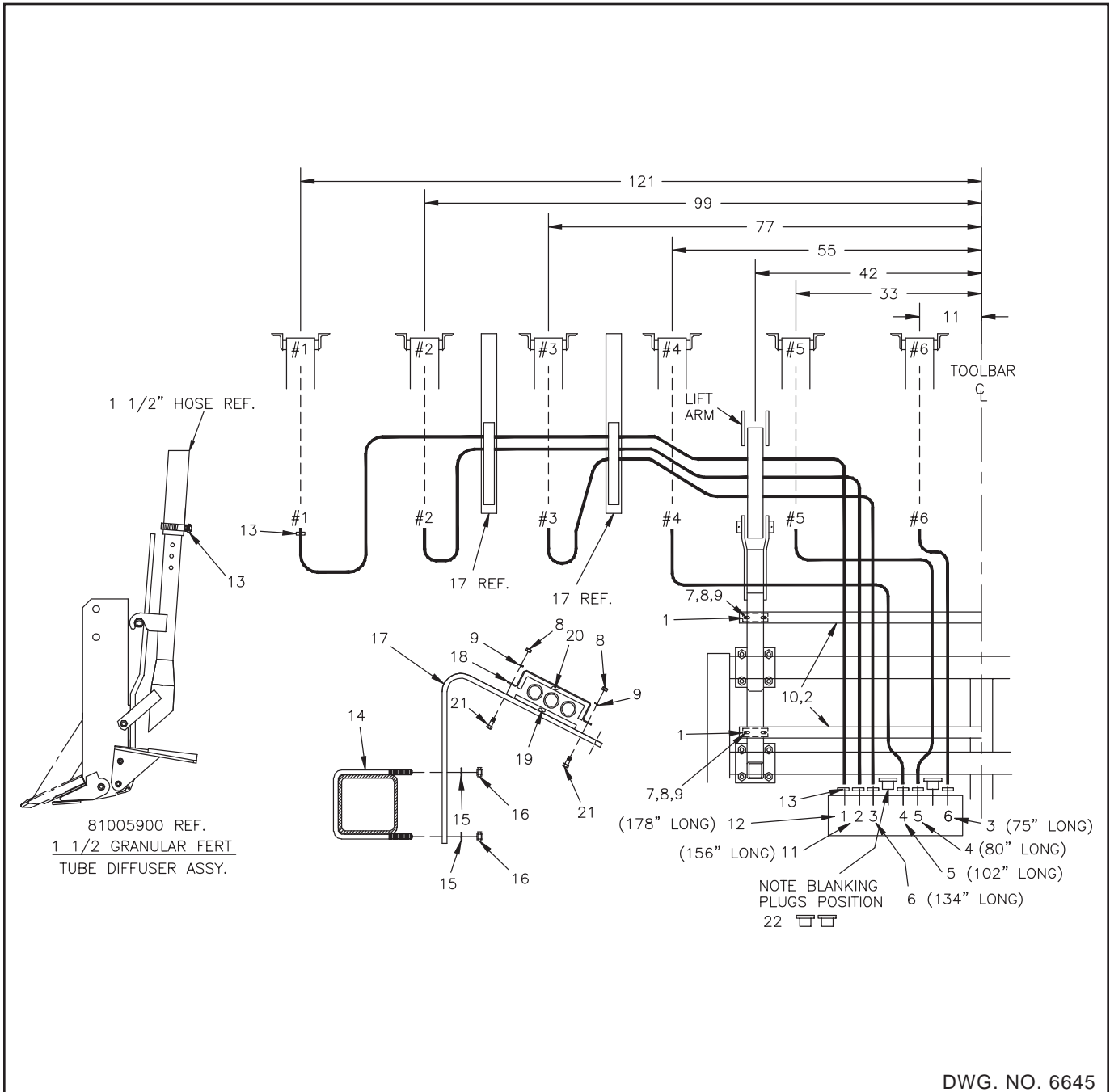
ASSEMBLY NOTES

1. Position of weight weldment (item 2) and tube weldment (item 1) as shown. NOTE: 20° ref. when driving in spring pin (item 3). Also note which hole to use in weight shaft to fit toolbar model being used.
2. Weight weldment (item 2) must be mounted on front side of both right and left side hinges.
3. Install lock bar weldment (item 6) using (2) hex bolt 3/8 x 1 1/2 (arrow 4) with (2) 3/8 lock washer shorten lift cylinder about 1" to allow lock bar to fall in place. Then extend cylinder to full extension. Check for proper preload on wing lock, if required use shims (arrow 7).
4. Extra shims will be stored by wiring in place as shown in drawing.

DWG. NO. 3242A

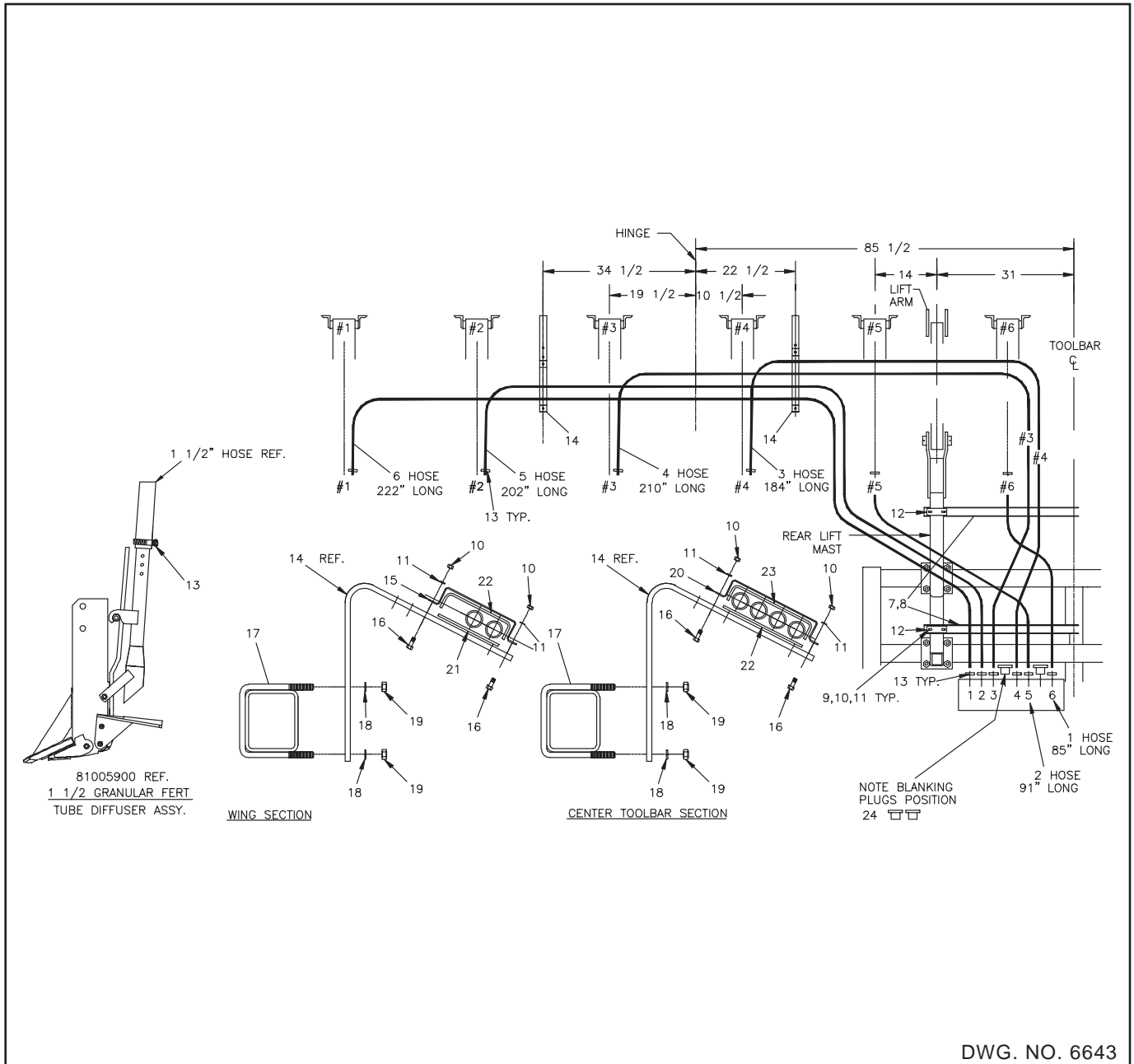
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81004700	Tube Weldment	2	6	81004697	Lock Bar Weldment	A/R
2	81004702	Weight Weldment	2	7	81004695	Shim	2
3	701-30022	Spring Pin 3/16 x 2	2	8	81003042	Pin	2
4	950-001-108	Hex Head Cap Screw 3/8-16 x 1 1/2	4	9	953-005-001	Hair Pin Cotter .120 x 2 3/8	2
5	952-001-007	Lock Washer 3/8 Inch	4				

1 1/2" Hose Assembly Diagram 12 Row 20-22 1 1/2" Hose Dry Fertilizer Air Assembly



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005137	Mount Plate	4	12	81005950	Clear W/White Hose 1.5 ID x 178"	2
2	81005590	Outer Hose Support	2	13	614582	Hose Clamp 1 1/16-2	24
3	81005552	Clear W/White Hose 1.5 ID x 75"	2	14	805-001-332	5/8 U-Bolt	4
4	81005553	Clear W/White Hose 1.5 ID x 80"	2	15	952-001-005	Lock Washer 5/8 Inch	8
5	81005554	Clear W/White Hose 1.5 ID x 102"	2	16	951-001-008	Hex Nut 5/8-11	8
6	81005948	Clear W/White Hose 1.5 ID x 134"	2	17	81005194	Tube Support	4
7	950-001-048	Hex Head Cap Screw 3/8-16 x 6 Gr. 5	8	18	81005415	Center Tube Support	4
8	951-001-005	Hex Nut 3/8-16	16	19	81005381	Weatherstrip 8"	4
9	952-001-007	Lock Washer 3/8 Inch Med Split SAE	16	20	81005101	Weatherstrip 10 1/4"	4
10	81005591	Inner Hose Support	2	21	950-001-105	Hex Head Cap Screw 3/8-16 x 1 Gr. 5	8
11	81005949	Clear W/White Hose 1.5 ID x 156"	2	22	81006146	Tapered Plug WW-3	4

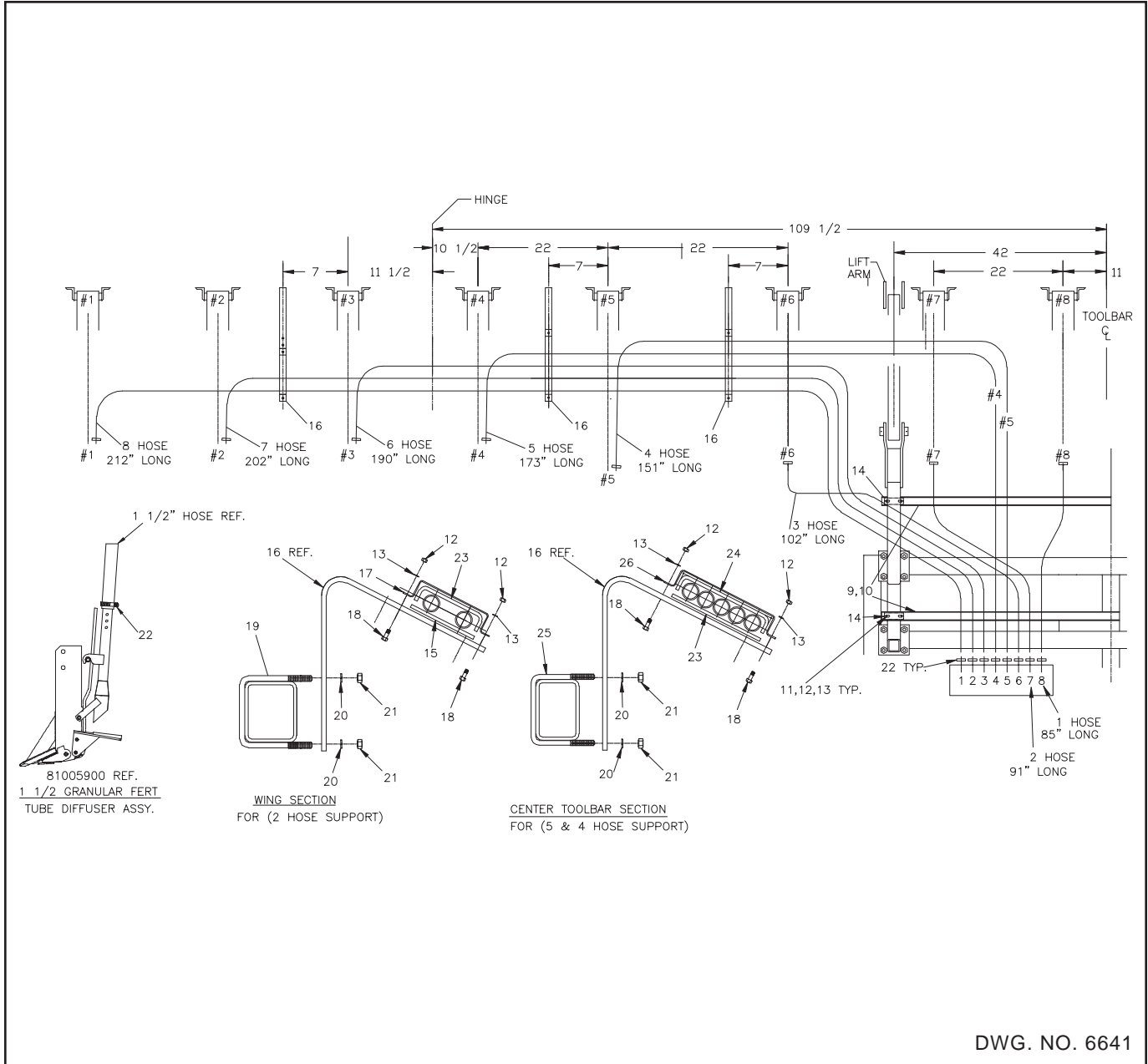
1 1/2" Hose Assembly Diagram 12 Row 30 1 1/2" Hose Dry Fertilizer Air Assembly



DWG. NO. 6643

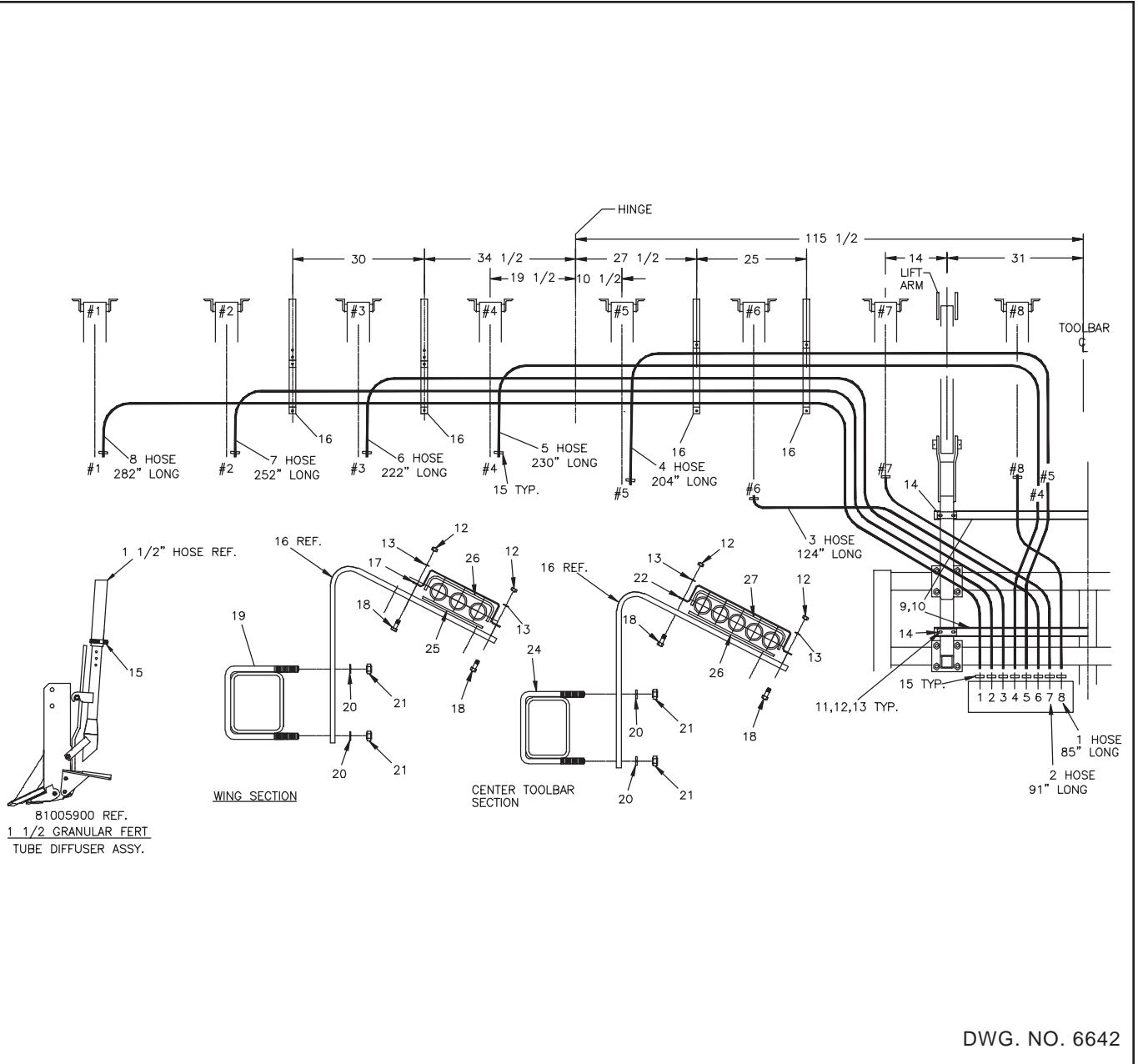
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005557	Clear W/White Hose 1 1/2 x 85"	2	14	81006016	Hinge Hose Support	4
2	81005559	Clear W/White Hose 1 1/2 x 91"	2	15	81005415	Center Tube Support	2
3	81006150	Clear W/White Hose 1 1/2 x 184"	2	16	950-001-105	Hex Head Cap Screw 3/8-16 x 1 Gr 5	8
4	81006154	Clear W/White Hose 1 1/2 x 210"	2	17	805-001-332	U-Bolt 5/8	4
5	81006152	Clear W/White Hose 1 1/2 x 202"	2	18	952-001-005	Lock Washer 5/8	8
6	81006156	Clear W/White Hose 1 1/2 x 222"	2	19	951-001-008	Hex Nut 5/8-11	8
7	81005590	Outer Hose Support	2	20	81005164	Center Tube Support	2
8	81005591	Inner Hose Support	2	21	81005381	Weatherstrip 8"	2
9	950-001-048	Hex Head Cap Screw 3/8-16 x 6 Gr 5	8	22	81005101	Weatherstrip 10 1/4"	4
10	951-001-005	Hex Nut 3/8-16	16	23	81005100	Weatherstrip 14"	2
11	952-001-007	Lock Washer 3/8 Inch	16	24	81006146	Tapered Plug WW-5	4
12	81005137	Mount Plate	4	25	81006163	Instruction Sheet 12R 30 1 1/2" Hose Assembly	1
13	614582	Hose Clamp 1 1/16-2 SS	24				

1 1/2" Hose Assembly Diagram 16 Row 22 1 1/2" Hose Dry Fertilizer Air Assembly



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005557	Clear W/White Hose 1 1/2 x 85"	2	15	81005381	Weatherstrip 8"	2
2	81005559	Clear W/White Hose 1 1/2 x 91"	2	16	81006016	Hinge Hose Support	6
3	81005554	Clear W/White Hose 1 1/2 x 102"	2	17	81005415	Center Tube Support	2
4	81006148	Clear W/White Hose 1 1/2 x 151"	2	18	950-001-105	Hex Head Cap Screw 3/8-16 x 1 Gr. 5	12
5	81006149	Clear W/White Hose 1 1/2 x 173"	2	19	805-001-332	U-Bolt 5/8	2
6	81006151	Clear W/White Hose 1 1/2 x 190"	2	20	952-001-005	Lock Washer 5/8 Inch	12
7	81006152	Clear W/White Hose 1 1/2 x 202"	2	21	951-001-008	Hex Nut 5/8-11	12
8	81006155	Clear W/White Hose 1 1/2 x 212"	2	22	614582	Hose Clamp 1 1/16-2 SS	32
9	81005590	Outer Hose Support	2	23	81005101	Weatherstrip 10 1/4"	6
10	81005591	Inner Hose Support	2	24	81005100	Weatherstrip 14"	4
11	950-001-048	Hex Head Cap Screw 3/8-16 x 6 Gr. 5	8	25	81003020	U-Bolt 5/8	4
12	951-001-005	Hex Nut 3/8-16	20	26	81006018	Center Hose Support	4
13	952-001-007	Lock Washer 3/8 Inch	20	27	81006161	Instruction Sheet 16 R 22 Assembly	1
14	81005137	Mount Plate	4				

1 1/2" Hose Assembly Diagram 16 Row 30 1 1/2" Hose Dry Fertilizer Air Assembly



81005900 REF.
1 1/2 GRANULAR FERT
TUBE DIFFUSER ASSY.

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005557	Clear W/White Hose 1 1/2 x 85"	2	15	614582	Hose Clamp 1 1/16-2 SS	32
2	81005559	Clear W/White Hose 1 1/2 x 91"	2	16	81006016	Hinge Hose Support	8
3	81006147	Clear W/White Hose 1 1/2 x 124"	2	17	81005415	Center Tube Support	4
4	81006153	Clear W/White Hose 1 1/2 x 204"	2	18	950-001-105	Hex Head Cap Screw 3/8-16 x 1 Gr 5	8
5	81006157	Clear W/White Hose 1 1/2 x 230"	2	19	805-001-332	U-Bolt 5/8	4
6	81006156	Clear W/White Hose 1 1/2 x 222"	2	20	952-001-005	Lock Washer 5/8 Inch	16
7	81006158	Clear W/White Hose 1 1/2 x 252"	2	21	951-001-008	Hex Nut 5/8-11	16
8	81006159	Clear W/White Hose 1 1/2 x 282"	2	22	81006018	Center Hose Support	4
9	81005590	Outer Hose Support	2	23	81006165	Instruction Sheet 16 R 30 1 1/2" Hose	1
10	81005591	Inner Hose Support	2	24	81003020	U-Bolt 5/8	4
11	950-001-048	Hex Head Cap Screw 3/8-16 x 6 Gr 5	8	25	81005381	Weatherstrip 8"	4
12	951-001-005	Hex Nut 3/8-16	24	26	81005101	Weatherstrip 10 1/4"	8
13	952-001-007	Lock Washer 3/8 Inch	24	27	81005100	Weatherstrip 14"	4
14	81005137	Mount Plate	4				

1 1/2" Hose Installation

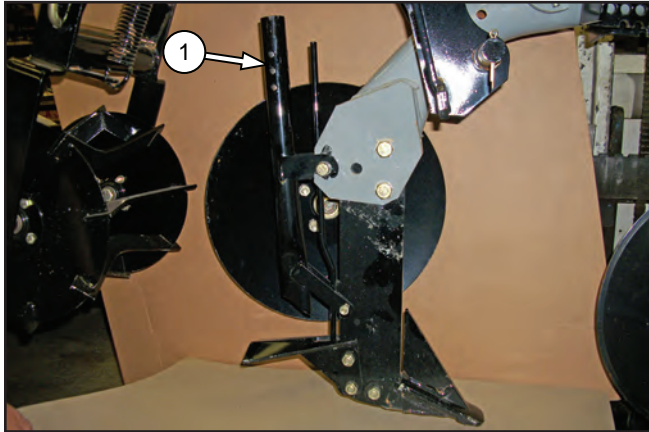


PHOTO NO. 1000568A

STEP 14: Install granular fertilizer tube (Arrow 1) onto row unit shank. See mount on page 40.

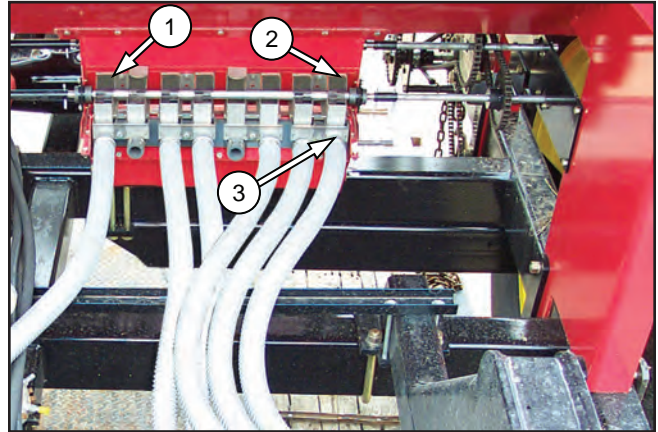


PHOTO NO. DCP0510C

STEP 16: Install clear w/white hoses starting on the inside (Arrow 1) and working to the outside (Arrow 2). Secure the end of hose with hose clamp (Arrow 3).

NOTE: See page 54-57 for proper length of hose for each location

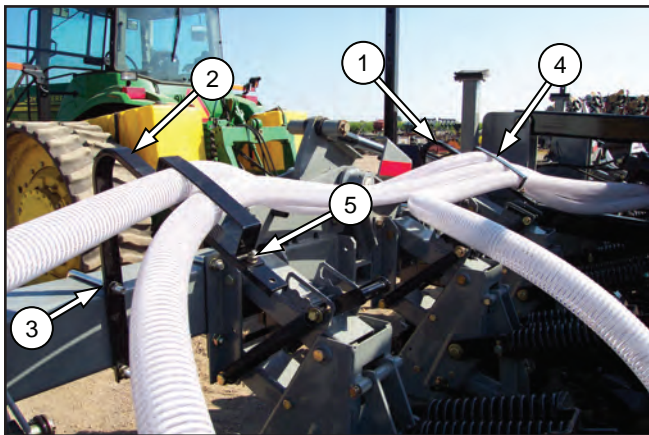


PHOTO NO. DCP2035A

STEP 15: Install hose support (Arrow 1) on center toolbar, and hose support (Arrow 2) on the two wing toolbars, using the dimension call out on assembly diagrams page 54 thru 57 using 5/8 U-bolts with 5/8 lock washer and 5/8 hex nut (Arrow 3). Install top hose bracket (Arrow 4)

NOTE: Use two hex bolts (Arrow 5) on each, with lock washer and hex nut. Do not tighten at this time.

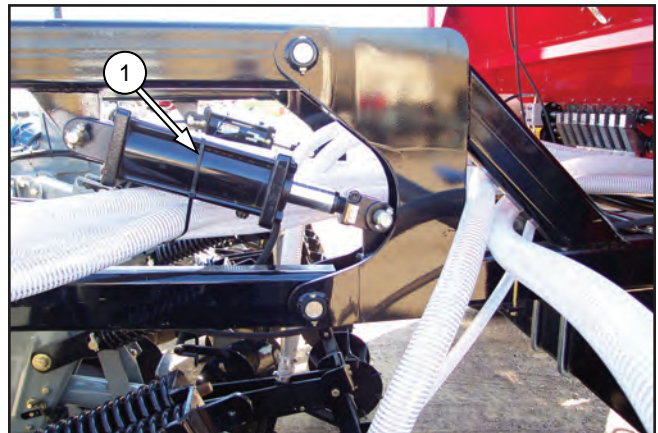


PHOTO NO. DCP2031A

STEP 17: Install all clear w/white hoses that run through or behind the rear mast. Use the hose assembly diagrams page 54-57 for proper position around toolbar lift.

NOTE: Hoses run under the lift cylinder will be secured with a plastic tie (Arrow 1).

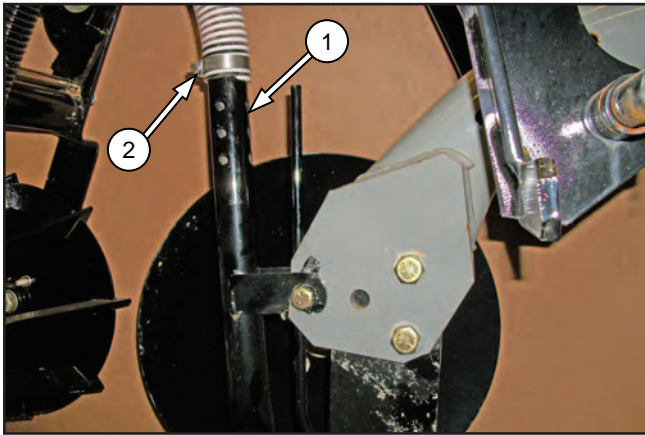


PHOTO NO. 1000656A

STEP 18: With all hoses properly placed through toolbar lift mast and toolbar hose support brackets place end of each hose over the end of the fertilizer tube (Arrow 1) and secure the hose with hose clamp (Arrow 2).

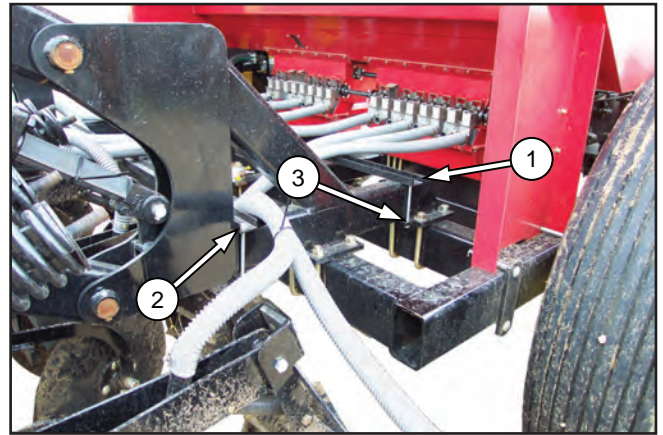


PHOTO NO. DCP0522B

STEP 20: Install the inner and outer hose support (Arrow 1&2) using four mount plate (Arrow 3) with eight 3/8 x 6 hex bolts, lock washers and 3/8 hex nuts.

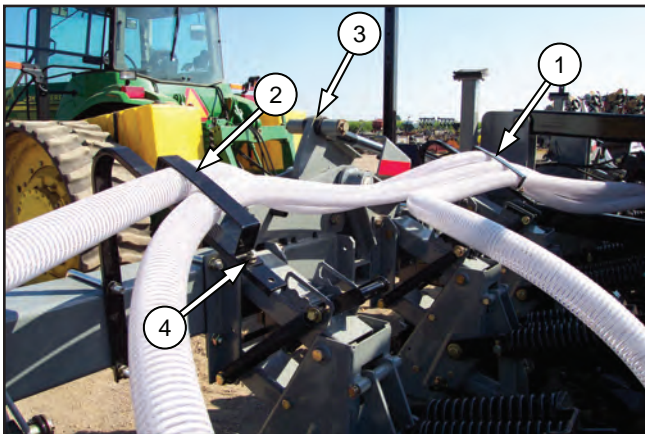
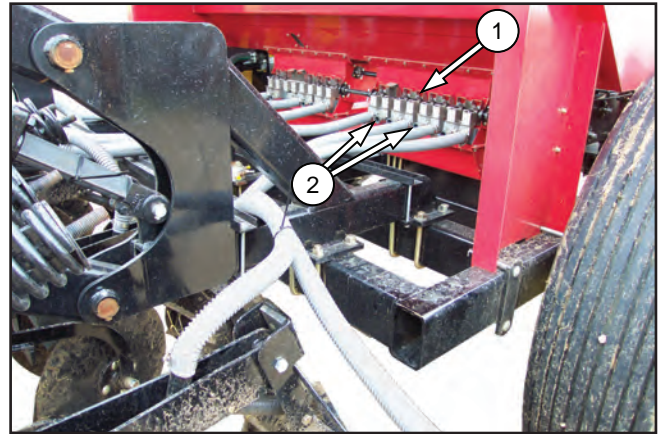


PHOTO NO. DCP2035B

STEP 19:
IMPORTANT: With all hoses in place on toolbar hose supports (Arrow 1&2), on folding toolbar models (Arrow 3). Lift each wing to 45 degrees 4 to 5 times to remove air out of lift cylinders. With that complete, lift each wing to full lift 170 degrees, to check the hose at hinge area are bending properly without crimping. With that complete, bring wings to flat position. Now lift off each top hose bracket (Arrow 1&2) and install weather stripping, by using the hose assembly diagram page 54-57 for proper length of weather stripping and position. Then reinstall the top hose bracket and secure with the two hex bolts (Arrow 4).



12 Row Units Only

PHOTO NO. DCPDCP0522C

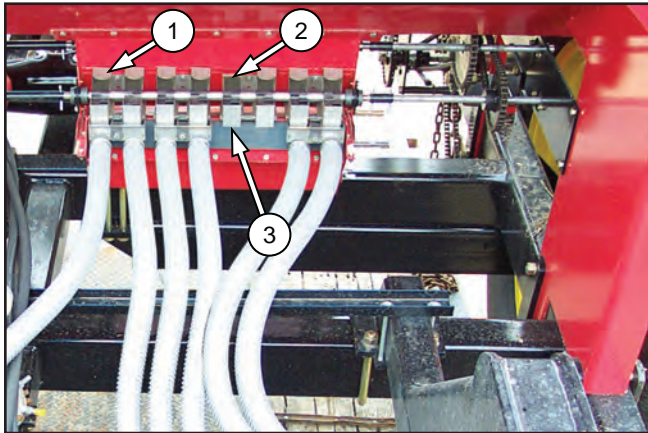
NOTE: 12 Row will require having metering slides in place (Arrow 1). This will block off the granular fertilizer. There is a total of (4) yellow blanking plugs, (2) to be installed on each side (Arrow 2). They will be installed through the fertilizer metering outlet hole, pushed all the way into the venturi block, to block off the air, at those locations.

1 1/2" Hose Granular Fertilizer Calibration

Important: Calibrate strip-till granular fertilizer metering each time a change occurs in type of fertilizer and weight per cubic foot.

The following variables affect the rate shown on rate charts on page 62 and 63.

1. Quality of granular fertilizer. Consistent size of the granules, the moisture, trash and rocks.
2. Operator Judgement. Land may contain more or less area (acres) than assumed. Guess row too wide or too narrow will effect over all rate.



12 Row

PHOTO NO. DCP0510D

Install all metering slides (Arrow 1) but one (Arrow 2).

Remove metering hose anchor. Hang a plastic pail under metering outlet (Arrow 3).

NOTE:

Weigh your pail before starting to calibrate.

Calibrate In Shop

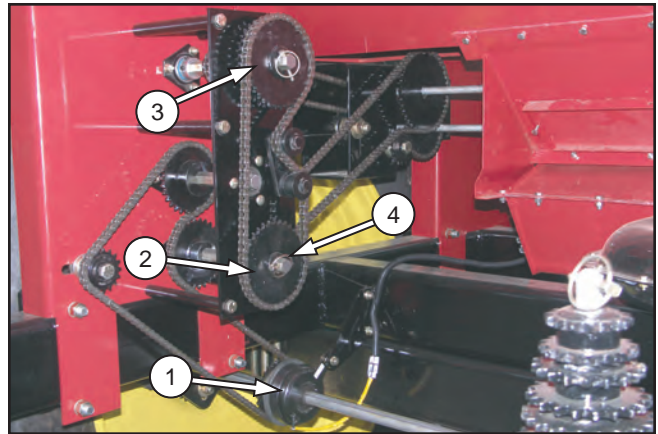


PHOTO NO. PICT0004A

STEP 1:

To calibrate the strip-till in the shop, disengage the electric clutch (Arrow 1).

STEP 2:

Select desired rate from fertilizer chart on page 62 and 63.

NOTE:

The amounts shown are approximate pounds to the acre.

STEP 3:

Install the proper number of tooth sprocket for rate.

NOTE:

Bottom sprocket (Arrow 2) is the driver and top sprocket (Arrow 3) is driven.

STEP 4:

Remove the klik pin (Arrow 4) with plastic pail in place. Turn 7/8 hex shaft counter clockwise 2 turns to fill the metering chamber, empty pail. With plastic pail in place, turn 7/8 hex shaft counter clockwise 17 3/4 turns.

STEP 5:

Weigh the total weight of fertilizer and pail, subtract weight of pail. This amount x 100 (1/100 acre) = total pounds per acre.

EXAMPLE:

65#/cu.ft. fertilizer driver 36 tooth, driven 32 tooth.

Weight of fertilizer in pail 1.8 lbs. x 100 = 180#/acre.

1 1/2" Hose Granular Fertilizer Calibration Continued

Reference Information

1 Acre = 43,560 sq. ft.
Divided By 100 = 435 sq. ft.

20 Inch Row = 1.66 ft.
22 Inch Row = 1.83 ft.
30 Inch Row = 2.50 ft.
36 Inch Row = 3.00 ft.
38 Inch Row = 3.16 ft.

Cart Tires 380/90 x 38
Circumference = 17.54 ft.

- 20 Inch Row; 435 sq. ft. \div 1.66 ft. = 261 ft.
261 ft. \div 17.54 ft. = 4.96 Rev. Of Cart Tire = 1/100 Acre
- 22 Inch Row; 435 sq. ft. \div 1.83 ft. = 237 ft.
237 ft. \div 17.54 ft. = 4.5 Rev. Of Cart Tire = 1/100 Acre
- 30 Inch Row; 435 sq. ft. \div 2.5 ft. = 174 ft.
174 ft. \div 17.54 ft. = 3.30 Rev. Of Cart Tire = 1/100 Acre
- 36 Inch Row; 435 sq. ft. \div 3 ft. = 144 ft.
144 ft. \div 17.54 ft. = 2.73 Rev. Of Cart Tire = 1/100 Acre
- 38 Inch Row; 435 sq. ft. \div 3.16 ft. = 138 ft.
138 ft. \div 17.54 ft. = 2.62 Rev. Of Cart Tire = 1/100 Acre

The strip-till unit can be calibrated in the field by traveling the distance shown above or counting revolution of cart tire for 1/100 acre.

The fertilizer chart is showing 30 inch row spacing. For a different row spacing, multiply the number shown on the chart by the conversion factor.

20 Inch Row	22 Inch Row	36 Inch Row	38 Inch Row
1.5	1.36	.833	.791

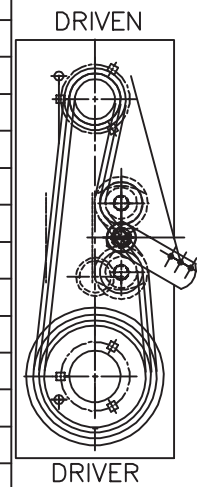
Example:

36 Inch Rows
(Ratio 1:1.2500 65#/cu. ft. 30" Rows = 200#/acre)
200#/Acres x .833 = 166#/Acre

1 1/2" Hose Granular Fertilizer Chart

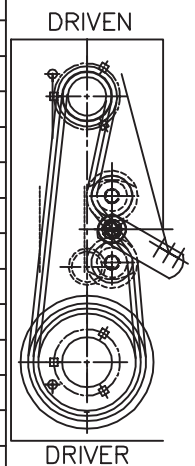
Important: This chart is a guide only; Unit should be checked with fertilizer to be used as described on page 60.

SPROCKETS		80#/CU FT	65#/CU FT	60#/CU FT	55#/CU FT	50#/CU FT
DRIVEN	DRIVER	30" ROW	30" ROW	30" ROW	30" ROW	30" ROW
		#/ACRE	#/ACRE	#/ACRE	#/ACRE	#/ACRE
36	14	76	62	57	52	47
35	14	78	64	59	54	49
36	16	87	71	66	60	55
35	16	90	73	67	62	56
36	18	98	80	74	66	62
35	18	101	82	76	69	63
36	20	109	89	82	75	68
32	18	110	90	83	76	69
35	20	112	91	84	77	70
30	18	118	96	89	81	74
36	22	120	98	90	83	75
32	20	123	100	92	85	77
35	22	124	101	93	85	78
28	18	126	103	95	87	79
36	24	131	107	99	91	82
35	24	135	110	102	93	85
26	18	136	111	102	94	85
28	20	140	114	105	96	88
36	26	142	116	107	98	89
30	22	144	117	108	99	90
35	26	146	119	110	101	92
24	18	147	120	111	101	92
26	20	151	123	114	104	95
36	28	153	124	114	105	95
28	22	154	126	116	107	97
35	28	157	128	118	108	98
32	26	160	130	120	110	100
22	18	161	131	121	111	101
36	30	164	133	123	113	102
26	22	166	135	125	114	104
35	30	168	137	127	116	105
30	26	170	139	128	118	107
32	28	172	140	129	118	108
36	32	175	142	131	120	109
22	20	179	145	134	123	112
35	32	180	146	135	124	112
26	24	181	148	137	125	114
30	28	183	149	138	126	115
36	35	191	156	144	132	120
35	35	197	160	148	135	123
35	36	202	165	152	140	127
28	30	210	171	158	145	132
24	26	213	173	160	146	133



1 1/2" Hose Granular Fertilizer Chart

SPROCKETS		80#/CU FT	65#/CU FT	60#/CU FT	55#/CU FT	50#/CU FT
DRIVEN	DRIVER	30" ROW #/ACRE	30" ROW #/ACRE	30" ROW #/ACRE	30" ROW #/ACRE	30" ROW #/ACRE
32	35	215	175	162	148	135
20	22	216	176	162	149	135
32	36	221	180	166	152	138
26	30	227	185	171	157	142
30	35	229	187	173	158	144
22	26	232	189	174	160	145
30	36	236	192	177	162	148
18	22	240	196	181	166	151
28	35	246	200	185	169	154
22	28	250	204	188	173	157
28	36	253	206	190	174	158
20	26	256	208	192	176	160
24	32	262	213	197	180	164
26	35	265	215	198	182	165
22	30	268	218	201	184	168
26	36	272	222	205	188	171
20	28	275	224	207	189	172
18	26	284	231	213	195	178
24	35	287	233	215	197	179
24	36	296	240	222	203	185
18	28	306	249	230	211	192
22	35	313	255	235	216	196
20	32	315	256	236	217	197
22	36	322	262	242	222	202
18	30	328	267	246	226	205
20	35	345	280	258	237	215
18	32	350	284	262	240	218
20	36	354	288	266	244	222
18	35	383	311	287	263	239
18	36	394	320	295	271	246
16	35	430	350	323	296	269
16	36	443	360	333	304	277
14	35	492	400	369	338	308
14	36	506	411	379	347	316



FOR DIFFERENT WEIGHT OF FERTILIZER NOT SHOWN
ABOVE MULTIPLY BY THE CONVERSION FACTOR
USING 65#/CU FT AS STARTING POINT

$$\frac{\text{ANY WEIGHT/CU FT}}{65\#/CU FT} = \text{XXX}$$

EXAMPLE:
WANTING 208# PRODUCT PER ACRE; WITH FERTILIZER AT 52#/CU FT.

$$\frac{52\#/CU FT}{65\#/CU FT} = .800$$

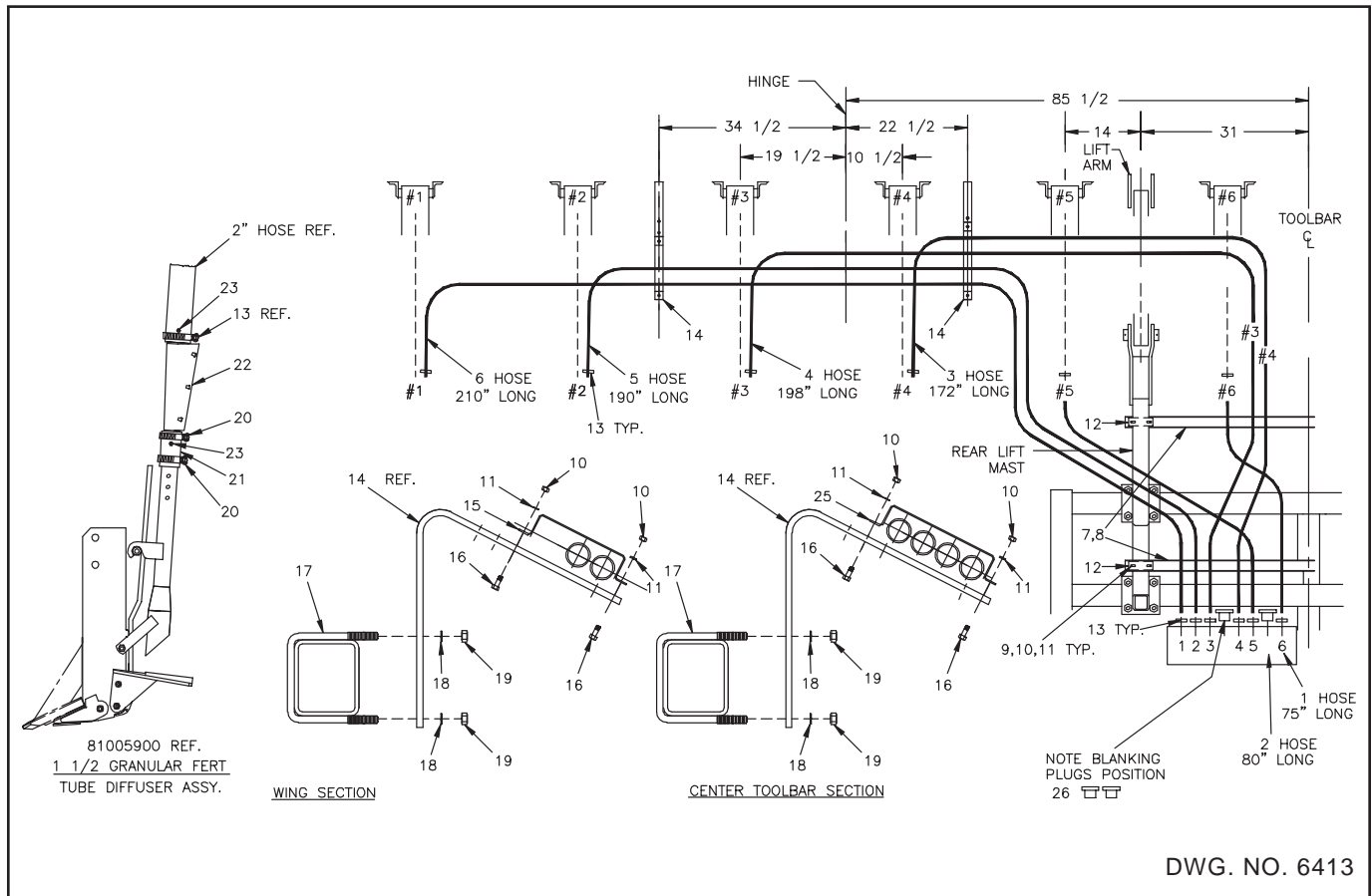
$$\frac{208\#/ACRE}{.800} = 260\#/ACRE \text{ FROM THE FERTILIZER CHART}$$

USE 36 DRIVER SPROCKET
22 DRIVEN SPROCKET

RECHECK; 260#/ACRE X .800 = 208#/ACRE

DWG. NO. 5832

2" Hose Assembly Diagram 12 Row 30 2" Hose Granular Fertilizer Air Assembly



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81006008	Clear W/White Hose 2 x 75"	2	14	81006016	Hinge Hose Support	4
2	81006009	Clear W/White Hose 2 x 80"	2	15	81005415	Center Tube Support	2
3	81006022	Clear W/White Hose 2 x 172"	2	16	950-001-105	Hex Head Cap Screw 3/8-16 x 1" Gr. 5	8
4	81006023	Clear W/White Hose 2 x 198"	2	17	805-001-332	U-Bolt 5/8	4
5	81006024	Clear W/White Hose 2 x 190"	2	18	952-001-005	Lock Washer 5/8 Inch	8
6	81006010	Clear W/White Hose 2 x 210"	2	19	951-001-008	Nut Hex 5/8-11	8
7	81005590	Outer Hose Support	2	20	614582	Hose Clamp 1 1/16-2	24
8	81005591	Inner Hose Support	2	21	81006017	Clear W/White Hose 1 1/2 x 3 1/4"	12
9	950-001-048	Hex Head Cap Screw 3/8-16 x 6 Gr. 5	8	22	81005770	Diffuser Assembly	12
10	951-001-005	Hex Nut 3/8-16	16	23	031-30078	Slotted Hex Head Self Tapping Screw #8-18 x 1/2	24
11	952-001-007	Lock Washer 3/8	16	24	81006025	Instruction Sheet 12R 30 Assembly	1
12	81005137	Mount Plate	4	25	81005164	Center Tube Support	2
13	617177	Hose Clamp 2 1/2 SS	24	26	81006105	Blanking Plug	4

Install inner and outer pipe hose support (Arrow 7 & 8) using mount plate at bottom (Arrow 12) and bolts provided in front of fertilizer metering outlets.

Install hinge hose support (Arrow 14) with 5/8" U-bolt (Arrow 17) as shown in drawing. Route the 2" hose over pipe hose supports through lift arm and hose support as shown in drawing.

Note: Hoses for row 3 and 4 pass in front of cylinders. Row 1, 2 and 5 hoses pass behind rear lift mast.

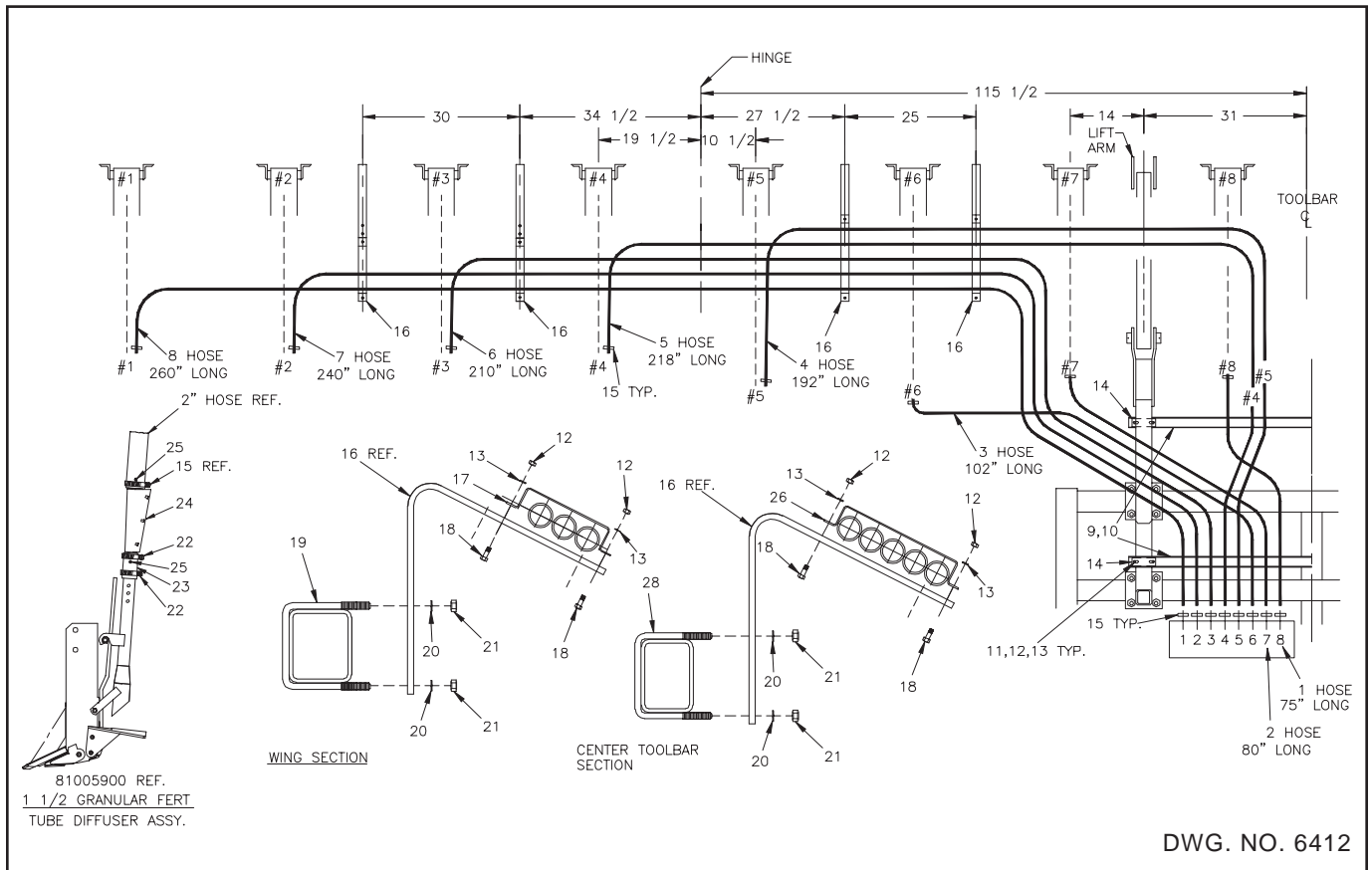
Note: Hoses are made to proper length for each row and routing.

Note: Blanking yellow plugs are found in the on/off switch box, located on top of the tank screen.

There are a total of (4) yellow blanking plugs, (2) to be installed on each side (Arrow 2). They will be installed through the fertilizer metering outlet hole, pushed all the way into the venturi block, to block off the air, at those four locations.

For more detail installation instruction of the diffuser assembly and attachment at the fertilizer metering outlets, see page 66.

2" Hose Assembly Diagram 16 Row 30 2" Hose Granular Fertilizer Air Assembly



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81006008	Clear W/White Hose 2 x 75"	2	15	617177	Hose Clamp 2 1/2 SS	32
2	81006009	Clear W/White Hose 2 x 80"	2	16	81006016	Hinge Hose Support	8
3	81006011	Clear W/White Hose 2 x 102"	2	17	81005415	Center Tube Support	4
4	81006012	Clear W/White Hose 2 x 192"	2	18	950-001-105	Hex Head Cap Screw 3/8-16 x 1" Gr. 5	8
5	81006013	Clear W/White Hose 2 x 218"	2	19	805-001-332	U-Bolt 5/8	4
6	61006010	Clear W/White Hose 2 x 210"	2	20	952-001-005	Lock Washer 5/8"	16
7	81006014	Clear W/White Hose 2 x 240"	2	21	951-001-008	Hex Nut 5/8-11	16
8	81006015	Clear W/White Hose 2 x 260"	2	22	614582	Hose Clamp 1 1/16-2	24
9	81005590	Outer Hose Support	2	23	81006017	Clear W/White Hose 1 1/2 X 3 1/4"	16
10	81005591	Inner Hose Support	2	24	81005770	Diffuser Assembly	16
11	950-001-048	Hex Head Cap Screw 3/8-16 x 6 Gr. 5	8	25	031-30078	Slotted Hex Head Self Tapping Screw #8-18 x 1/2	32
12	951-001-005	Hex Nut 3/8-16	24	26	81006018	Center Hose Support	4
13	952-001-007	Lock Washer 3/8 Inch	24	27	81006019	Instruction Sheet 16R 30 Assembly	1
14	81005137	Mount Plate	4	28	81003020	U-Bolt 5/8	4

Install inner and outer pipe hose support (Arrow 9 & 10) using mount plate at bottom (Arrow 14) and bolts provided in front of fertilizer metering outlets.

Install hinge hose support (Arrow 16) with 5/8" U-bolt (Arrow 19) as shown in drawing. Route the 2" hose over pipe hose supports through lift arm and hose support as shown in drawing.

Note: Hoses are made to proper length for each row and routing.

For more detail installation instruction of the diffuser assembly and attachment at the fertilizer metering outlets, see page 66.

2" Hose End Installation

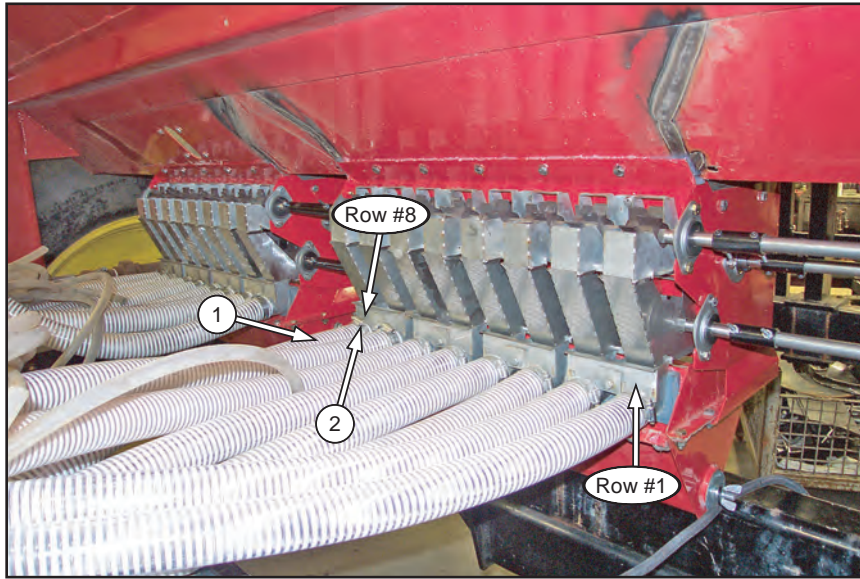


PHOTO NO. DCP15545A

Install proper length of 2" hose (Arrow 1). Starting from inside row #8 and work outward to row #1.

Install 2 1/2" hose clamp (Arrow 2). Repeat the installation of the hoses on the other side.

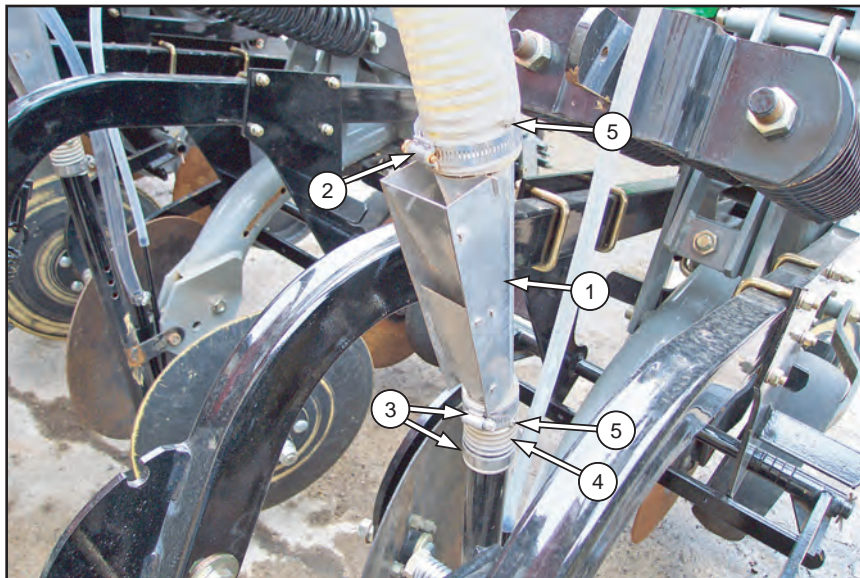


PHOTO NO. DCP2114A

When installing the air diffuser (Arrow 1) have the air opening to the rear as shown in photo. The 2 1/2" hose clamp (Arrow 2) at the top and

two 2" hose clamp (arrow 3) with a short 1 1/2" x 3 1/4" hose (Arrow 4) in the middle. Install two self tapping screws (Arrow 5).

Fertilizer Displacement Calibration Of One Brown Metering Wheel

Fertilizer At 65#/CU FT = .1813#/REV

$$\frac{\text{Any Weight/Cu Ft}}{65\#/Cu Ft} = \text{XXX}$$

Example \longrightarrow

$$\frac{52\#/Cu Ft}{65\#/Cu Ft} = .800$$

$$.1813\#/Rev \times .800 = .1450\#/Rev$$

Split Tank Dual Variable Drive And Component Specifications

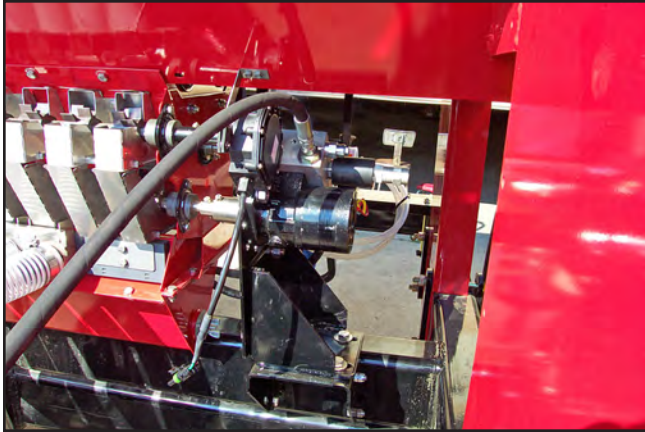


PHOTO NO. DCP1984

Left Hand Variable Hydraulic Drive

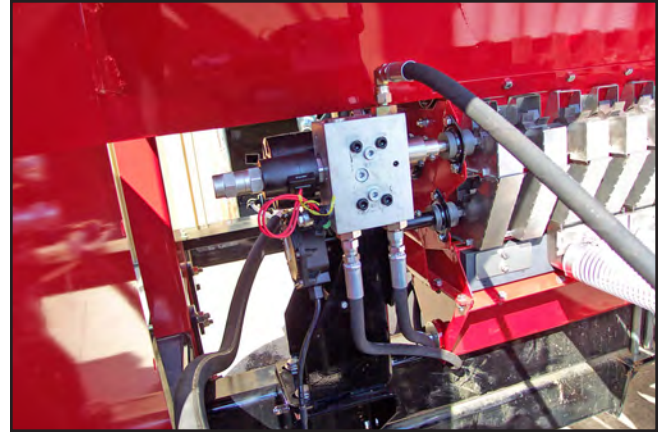


PHOTO NO. DCP2010

Right Hand Variable Hydraulic Drive



PHOTO NO. DJ002

Hydra Drive
Hiniker Part No. 81006004

Specifications:

General

RPM Operating Range: 4 to 180 RPM
 Hydraulic Oil Usage: 4.9 in 3/rev (80 cc/rev)
 Max Hydraulic Oil Usage: 4 gpm (15 LPM)
 Maximum Torque: 1400 inch pounds (160 Nm)
 Dimensions: 10.2 x 5.0 x 6.3 in (260 x 127 x 160 mm)
 Weight: 19.8 lbs (9.0 Kg)

Electrical

Control Signal: 12 Volts pulse width modulated
 Control Frequency: 200 Hz
 Maximum Current: 1.5 Amps
 2 Wire Weatherpack Connector

Hydraulic Connections

Tractor Hydraulics: Closed Center or Open Center
 HydraDrive Hydraulics: Pressure port 1/2" SAE (7/8 UNO) Return port 1/2" SAE (7/8 UNO)
 Adapter pigtails will be required to match variable rate controllers.

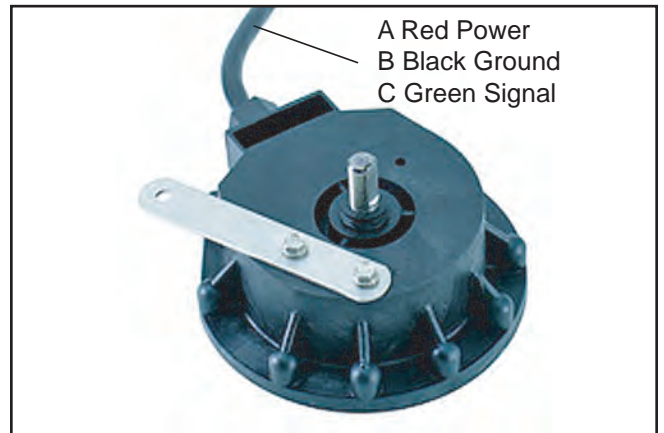


PHOTO NO. DJ001

Application Rate Sensor
Hiniker Part No. 81006003

Specifications:

Outputs at 360 pulses per revolution
 RPM range 2-2500
 12 volt sensor with square-wave signal output
 3-pin weather - pack connector

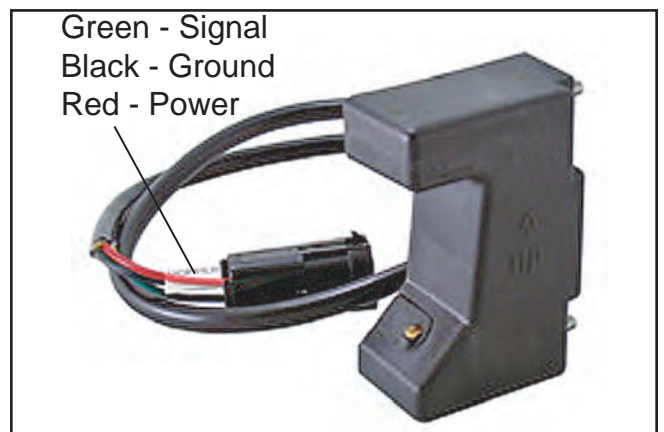
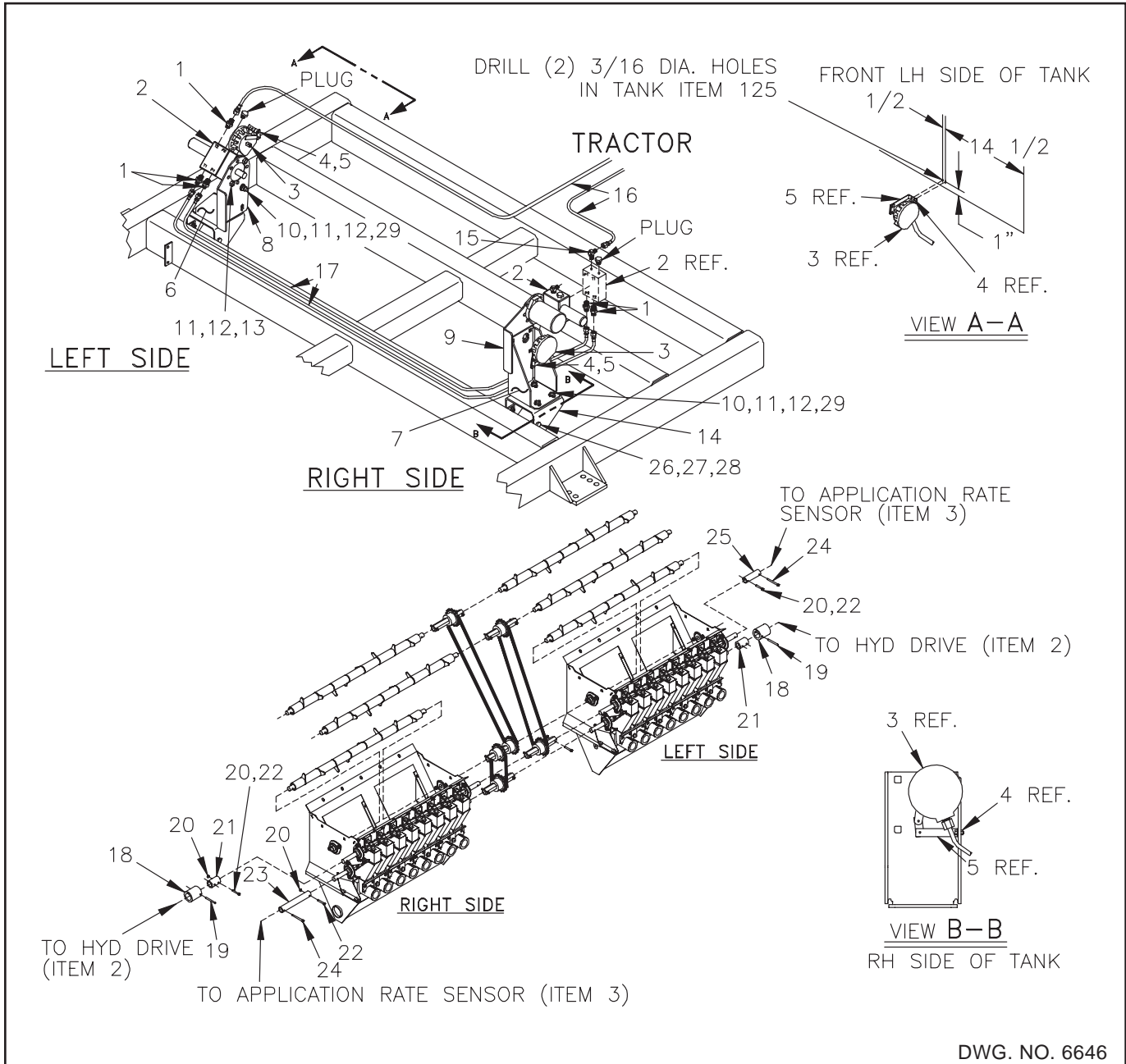


PHOTO NO. DJ003

Hopper Level Sensor
Hiniker Part No. 39411002

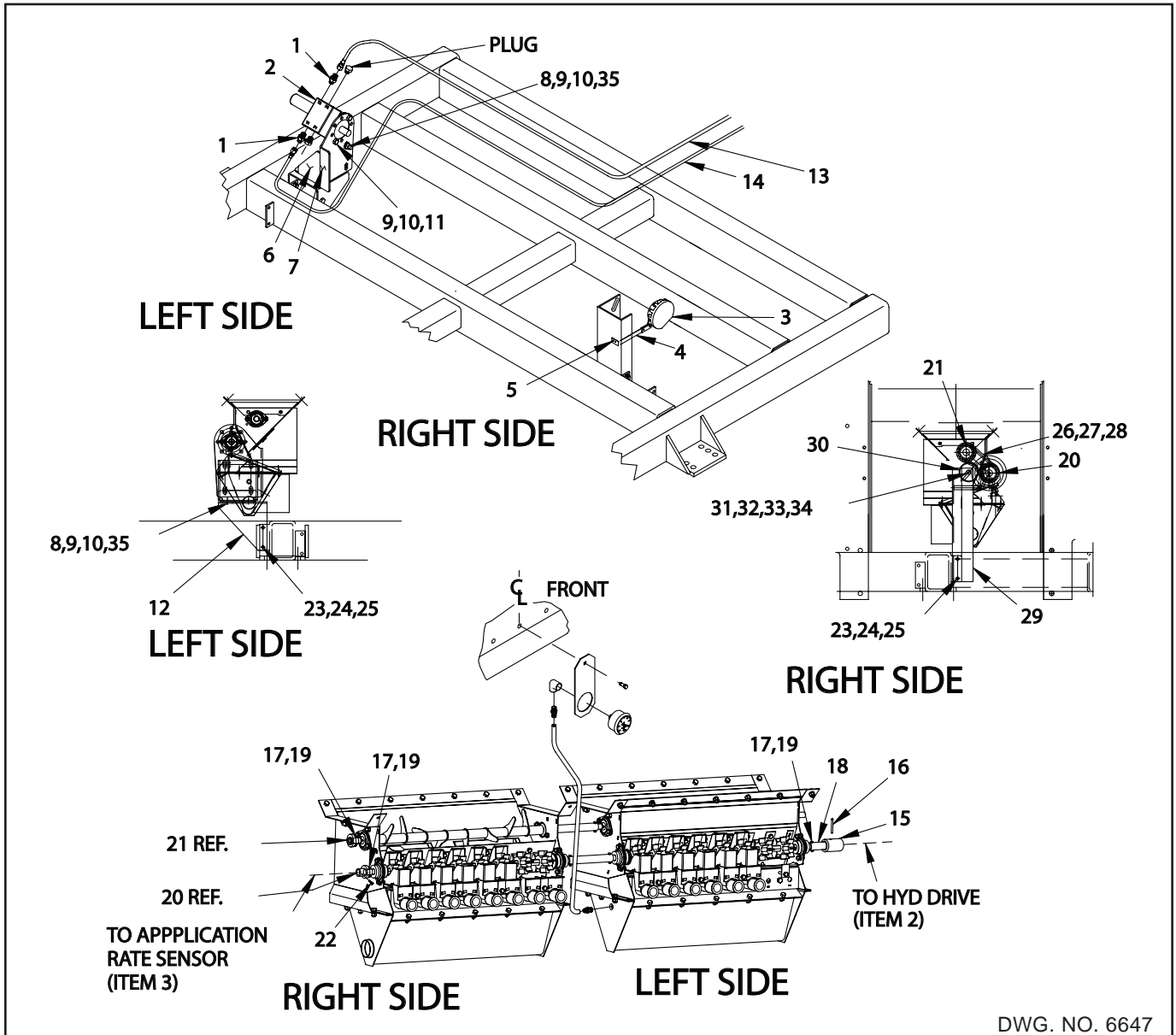
Split Tank Dual Variable Drive And Components



DWG. NO. 6646

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	956-003-031	Straight Fitting 9/16 x 7/8	5	16	957-002-012	Hose Assembly 3/8 x 282"	2
2	81006004	Hd 4180 Hydraulic Drive W/Valve	2	17	957-001-020	Hose Assembly 3/8 x 96"	2
3	81006003	Application Rate Sensor	2	18	81005960	Motor Shaft Coupling	2
4	81006058	L Bracket	2	19	701-30020	Slotted Spring Pin 3/16 x 1 3/4	2
5	951-005-010	Lock Nut 2-Way #10-32	2	20	392-010-010	Nylon Insert Lock Nut #10-24	4
6	81006001	LH Mounting Bracket	1	21	81005961	Shaft Coupler Bracket	2
7	81006002	RH Mounting Bracket	1	22	950-004-110	Socket Head Cap Screw #10-24 x 1 1/4	4
8	81005998	LH Motor Mounting Bracket	1	23	81006000	Sensor Shaft Long Coupling	1
9	81005997	RH Motor Mounting Bracket	1	24	060926	Machine Screw #10-24 x 1/2 Slotted Hex Head	2
10	950-003-019	Carriage Bolt 1/2-13 x 1 1/2 Gr. 5	16	25	81005999	Sensor Shaft Short Coupling	1
11	952-001-004	Lock Washer 1/2	20	26	950-001-105	Hex Head Cap Screw 3/8-16 x 1 Gr. 5	8
12	951-001-007	Hex Nut 1/2-13	20	27	952-001-007	Lock Washer 3/8 Inch Med Split SAE	8
13	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	4	28	951-001-005	Hex Nut 3/8-16	8
14	81005994	Mount Plate	2	29	952-002-005	Flat Washer 1/2 WRT	16
15	956-005-031	Fitting 90° Elbow 9/16 x 7/8	1				

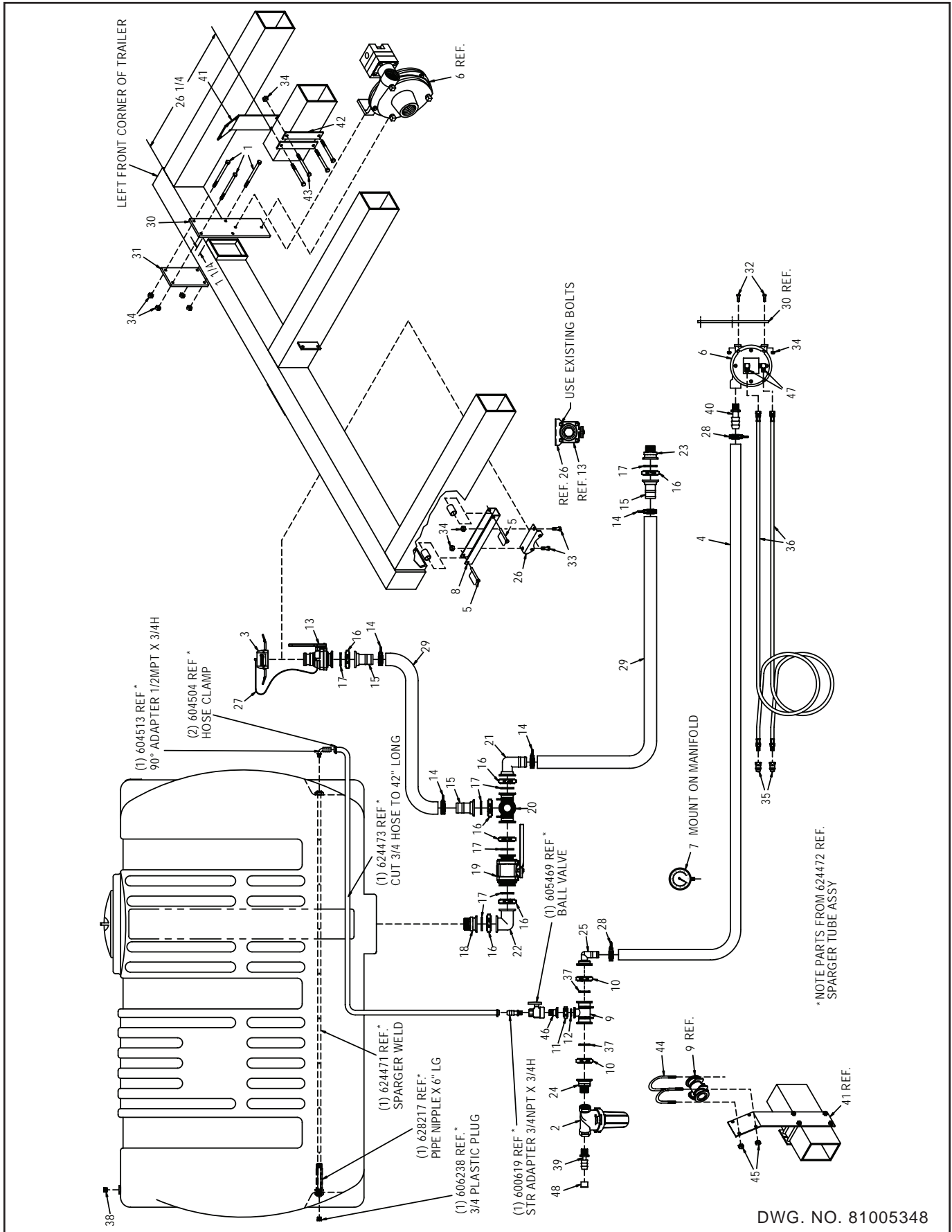
Single Tank Variable Drive And Components



DWG. NO. 6647

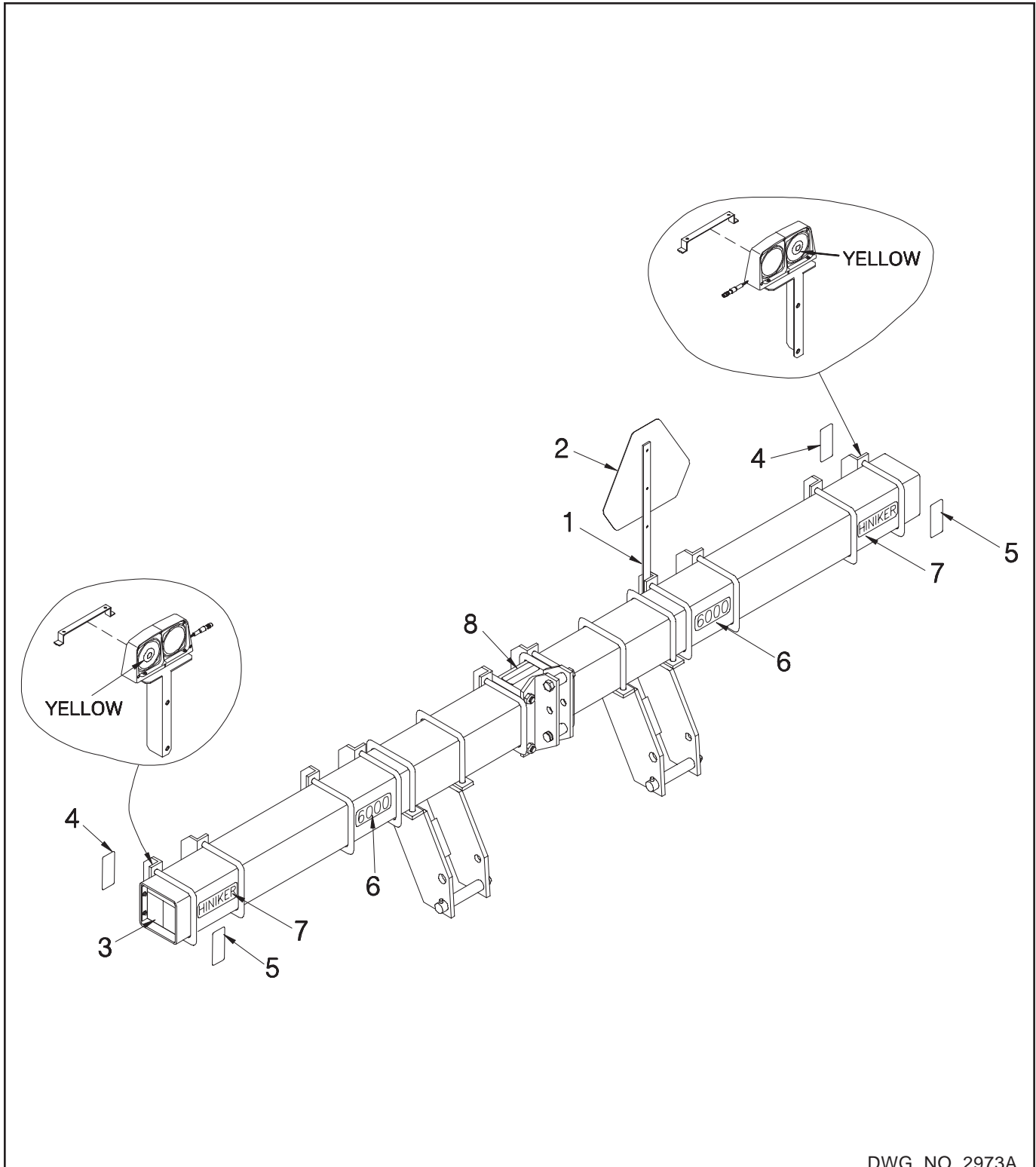
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	956-003-031	Straight Fitting 9/16 x 7/8	2	19	950-004-110	Socket Head Cap Screw #10-24 x 1 1/4	3
2	81006004	HD 4180 Hydraulic Drive W/Valve	1	20	81006092	Sensor Hub Sprocket #40 16T	1
3	81006003	Application Rate Sensor	1	21	81006093	Agitator Hub Sprocket W 340 16T	1
4	81006058	L Bracket	1	22	060926	Machine Screw #10-24 X 1/2 Slotted Hex Head	1
5	951-005-010	Lock Nut 2-Way #10-32	1	23	950-001-105	Hex Head Cap Screw 3/8-16 x 1 Gr. 5	6
6	81006001	LH Mounting Bracket	1	24	952-001-007	Lock Washer 3/8 Med Split SAE	6
7	81005998	LH Motor Mounting Bracket	1	25	951-001-005	Hex Nut 3/8-16	6
8	950-003-019	Carriage Bolt 1/2-13 x 1 1/2 Gr. 5	8	26	81006090	Roller Chain #40 35 Links SS	1
9	952-001-004	Lock Washer 1/2 Inch	10	27	81005982	Offset Link #40 SS	1
10	951-001-007	Hex Nut 1/2-13	10	28	81005983	#40 Connector Link SS	1
11	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	2	29	81006094	Vertical Mount Plate	1
12	81006096	Mount Plate	1	30	803-001-208	Idler Sprocket #40 17T	1
13	957-002-012	Hose Assembly 3/8 x 282"	1	31	950-001-023	Hex Head Cap Screw 5/8-11 x 2 Gr. 5	1
14	957-001-095	Hose Assembly 3/8 x 294"	1	32	952-002-007	Flat Washer 5/8 WRT	2
15	81005960	Motor Shaft Coupling	1	33	952-001-005	Lock Washer 5/8 Med Split SAE	1
16	701-30020	Slotted Spring Pin 3/16 x 1 3/4	1	34	951-001-008	Hex Nut 5/8-11	1
17	392-010-010	Nylon Insert Lock Nut #10-24	3	35	952-002-005	Flat Washer 1/2 WRT	8
18	81005961	Shaft Coupler	1				

81005348 Pump And Plumbing Kit



REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	031-06120	Hex Head Cap Screw 3/8-16 x 5 1/2 Gr. 5	4	26	627990	Bracket Stub Valve	1
2	615737	Strainer 124-1 1/4-NYB	1	27	628064	Lanyard 11" Banjo #V20207	1
3	615873	Cap QCX2 Banjo #S200CAP	1	28	628133	T-Bolt Clamp Banjo STC-162	2
4	81005586	Hose-1 1/4 x 25" 2 Ply	1	29	81005480	Quick Fill Hose 2 x 46"	2
5	623011	Pin-Lynch 5/16 x 2 3/4	2	30	81005482	Pump Mount Plate	1
6	624025	Hydraulic Cent Pump (See Page 76)	1	31	81005483	Pump Mount Backup	1
7	627074	Pressure Gauge 4" 200 Psi	1	32	950-001-108	Hex Head Cap Screw 3/8-16 x 1 1/2 Gr. 5	2
8	627509	Support	1	33	950-002-009	Hex Head Flanged Bolt 3/8-16 x 1 Whiz Lock	2
9	627765	Tee 2" Std Port 1" #M200100TEE	1	34	951-002-003	Hex Nut 3/8-16 Flanged Whiz Lock	12
10	627767	Flanged Clamp #FC200	2	35	956-008-030	Connector ISO Male Hyd 1/2 NPT	2
11	627769	Flange Clamp #FC100	1	36	957-004-013	Hose Assembly 3/8 x 276"	2
12	627770	Flange Gasket #100G	1	37	627768	Flange Gasket #150G	2
13	627774	QD 2" Valve #MVSF220FP	1	38	606238	Plug 3/4 Npt Hex Plastic	1
14	627775	Clamp #TC231	4	39	612447	Adapter 1 1/4 NPT x 1 H St.	1
15	627776	Hose Barb #M220BRB	3	40	604501	Adapter 1 .25 NPT x 1 .25 H	1
16	627777	Flange Clamp #FC220	7	41	81005585	Plumbing Mount Bracket	1
17	627778	Gasket EPDM #200G	7	42	81005161	Strap	2
18	627779	Flange x MNPT 2" #M220 MPT	1	43	950-001-209	Hex Head Cap Screw 3/8-16 x 5 Gr. 5	4
19	627780	Ball Valve 2" #MV220CP	1	44	617958	U-Bolt 5/16 x 3	2
20	627781	Tee 2" #M220TEE	1	45	951-002-002	Hex Nut 5/16-18 Flanged Whiz Lock	4
21	627783	Hose Barb 2" #M220BRB90	1	46	628116	Flange Adapter #M100075MPT	1
22	627903	Elbow #M220CPG90	1	47	956-005-012	90° Elbow 3/8 MNPT x 9/16 MJIC	2
23	627904	2" Flange x 1 1/2 MNPT CONN	1	48	36717006	Dust Cap 10 Pin SS CONN	1
24	627905	2" Flange x 1 1/4 MNPT CON	1	49	900-001-061	Box 14 x 16 x 36	1
25	628121	Flanged Hose Barb 1 1/4 #M200125BRB90	1				

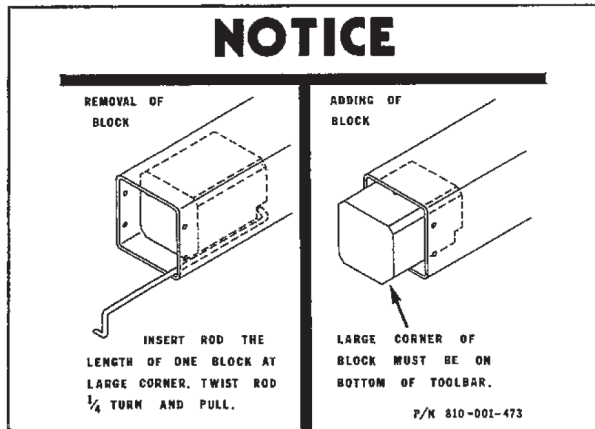
**RIGID TOOLBAR
6000 ST MODEL STRIP-TILL
6 ROW 30, 8 ROW 30, 12 ROW 20/22**



DWG. NO. 2973A

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	815-001-004	SMV Mount Strap	1	5	850-001-285	Tape Reflector (Yellow)	2
2	850-001-354	SMV Sign	1	6	81004129	6000 Decal	2
3	810-001-473	Decal - Notice	1	7	81004138	Hiniker Decal	2
4	850-001-305	Tape Reflector (Red)	2	8	850-002-426	Caution Decal	1

STEP 15A

DECAL IDENTIFICATION AND PLACEMENT
RIGID TOOLBAR

Decal one 810-001-473 (arrow 3) on end cover without serial number tag.

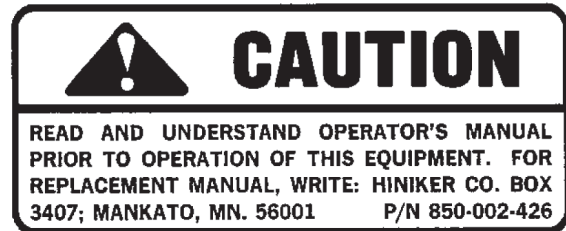
Rigid toolbars install two 850-001-305 red reflective tapes (arrow 4) on the outer rear of toolbar (one on each end). Install two 850-001-285 yellow (arrow 5) reflective tapes on the outer front of toolbar (one on each end).

6000

Decal two 81004129 6000 decal (arrow 6) on front side of toolbar, between second outer tillage unit U-Bolts (one on each end).

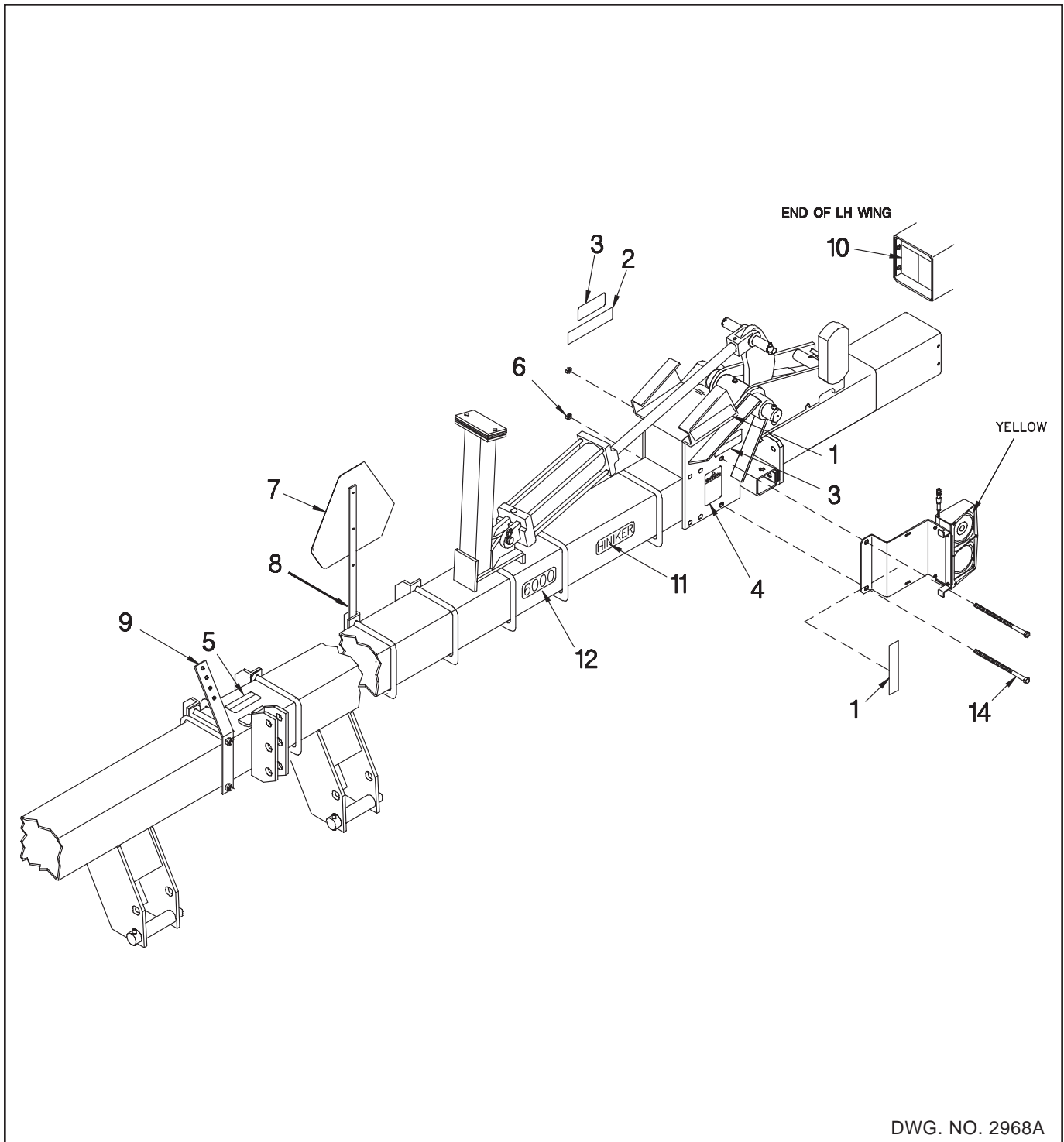
HINIKER

Decal two 81004136 Hiniker Decal (arrow 7) on front side of toolbar between outer tillage unit U-Bolt (one on each end).



Decal one 850-002-426 (arrow 8) on toolbar top on centerline.

**6000 FOLDING TOOLBAR
6000 ST MODEL STRIP-TILL
8 ROW 30, 8 ROW 36 - 38, 12 ROW 30 16 ROW 20**

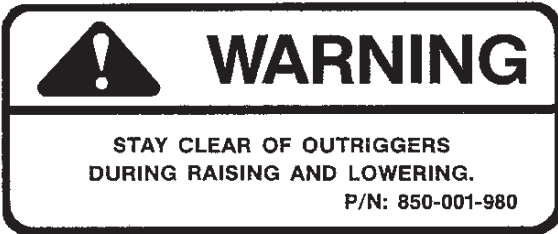


DWG. NO. 2968A

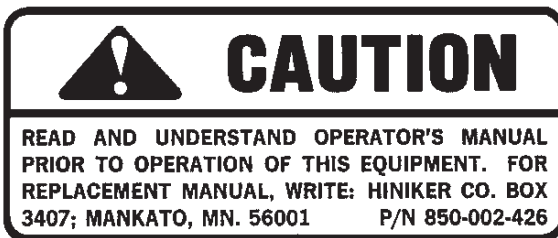
REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	850-001-285	Yellow Reflective Tape	2	8	815-001-004	SMV Mount Strap	1
2	850-001-305	Red Reflective Tape	2	9	850-001-784	30° Bulkhead Plate	1
3	850-001-980	Warning Decal	4	10	810-001-473	Decal Notice	1
4	850-001-306	Warning Decal	2	11	81004136	Hiniker Decal	2
5	850-002-426	Caution Decal	1	12	81004129	6000 Decal	2
6	951-001-008	Hex Nut 5/8	4	13	952-001-005	Lock Washer 5/8 (Not Shown)	4
7	850-001-354	SMV Sign	1	14	950-001-230	Hex Head Cap Screw 5/8-11 x 9 1/2 Gr. 5	4

STEP 15B

DECAL IDENTIFICATION AND PLACEMENT
FOLDING TOOLBAR

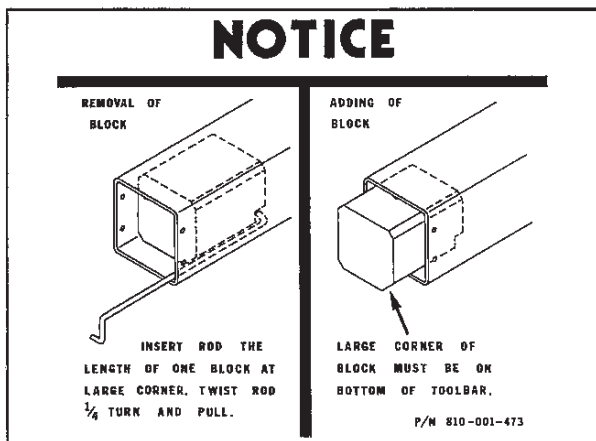


Decal four 850-001-980 (arrow 3) on front and back of toolbar near hinge.



Decal one 850-002-426 on front of toolbar left of upper hitch.

Folding toolbars install two 850-001-305 red reflective tapes on the outer rear of center frame (one on each end). Install two 850-001-285 yellow-reflective tapes (arrow 1) on the outer front of center frame (one on each end).



Decal one 810-001-473 (arrow 10) on end cover without serial number tag.



Decal two 850-001-306 (arrow 4) on front side of toolbar (one on each end).

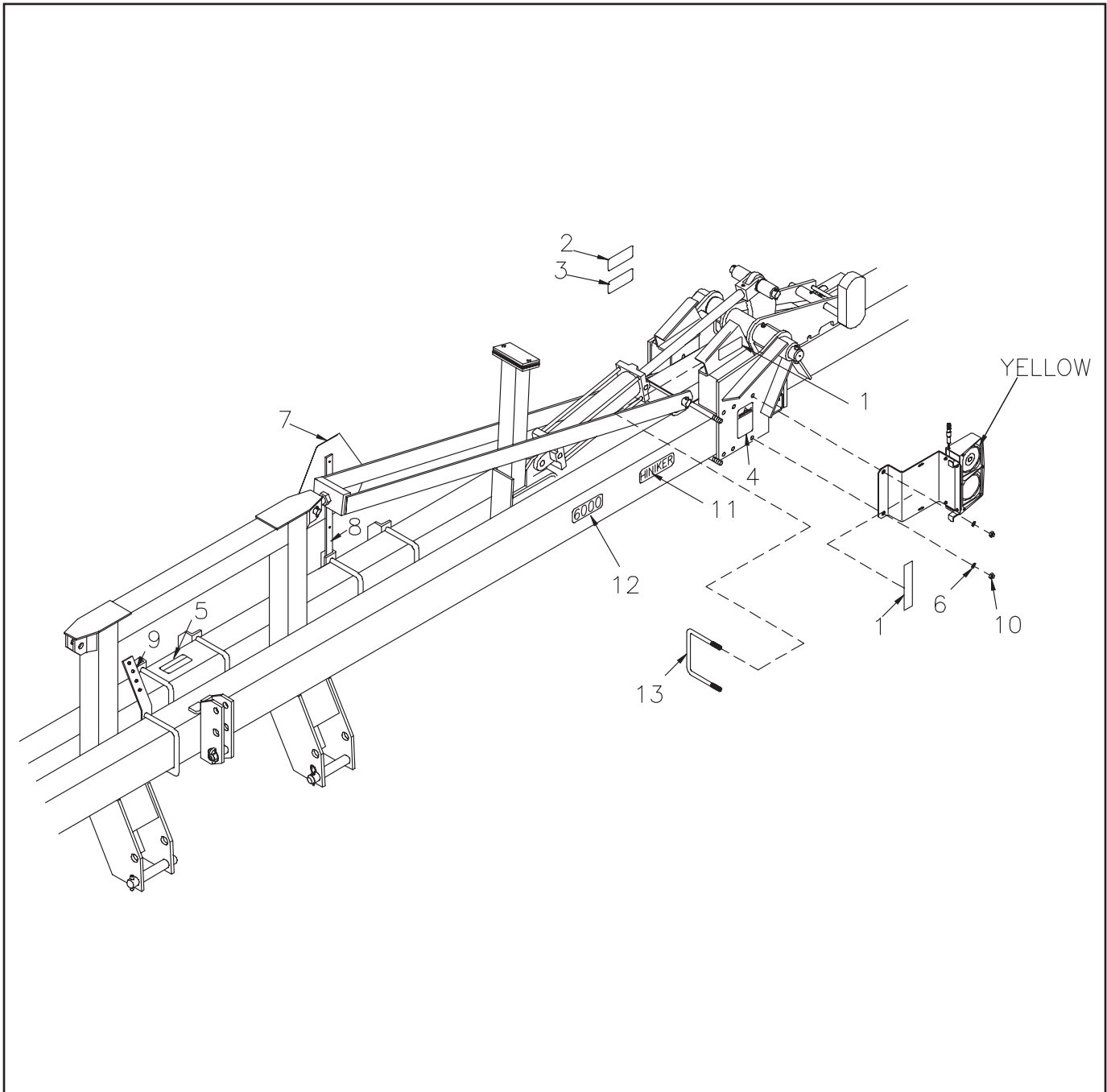


Decal two 81004136 Hiniker decal (arrow 11) on front side of toolbar between outer tillage unit U-Bolt (one on each end).



Decal two 81004129 6000 decal (arrow 12) between second outer tillage unit U-Bolts (one on each end).

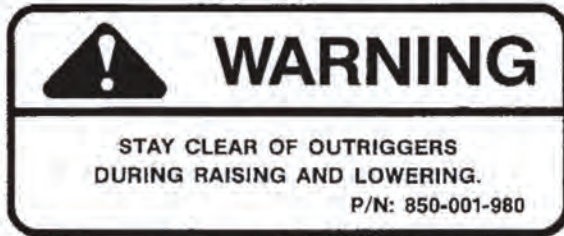
**6000 FOLDING TOOLBAR
6000 ST MODEL STRIP-TILL
16 ROW 22, 16 ROW 30**



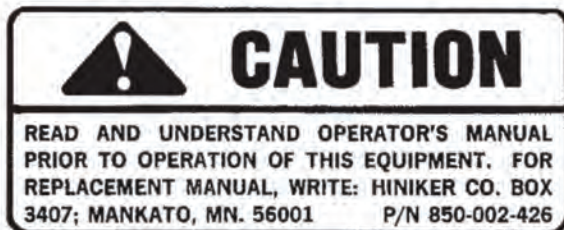
DWG. NO. 6433

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	850-001-285	Yellow Reflector Tape	2	9	805-001-784	30° Bulkhead Plate	1
2	850-001-305	Red Reflector Tape	2	10	810-001-473	Decal Notice	1
3	850-001-980	Warning Decal	4	11	81004136	Hiniker Decal	2
4	850-001-306	Warning Decal	2	12	81004129	6000 Decal	2
5	951-001-008	Hex Nut 5/8-11	4	13	81003020	U-Bolt 5/8 x 7 5/8 Inch	2
6	952-001-005	Lock Washer 5/8	4	14	715-02020	Name Plate Serial Tag (Not Shown)	1
7	850-001-354	SMV Sign	1	15	954-002-001	Pop Rivet 1/8 x 3/8 SS (Not Shown)	2
8	815-001-004	SMV Mount Strap	1				

STEP 15C

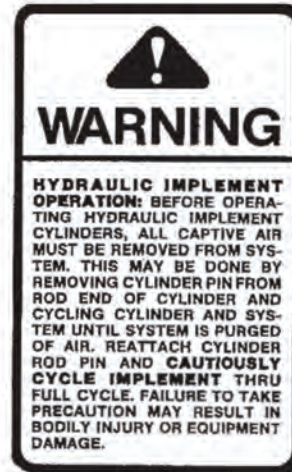
DECAL IDENTIFICATION AND PLACEMENT
FOLDING TOOLBAR

Decal four 850-001-980 (arrow 3) on front and back of toolbar near hinge.



Decal one 850-002-426 on front of toolbar left of upper hitch.

Folding toolbars install two 850-001-305 red reflective tapes on the outer rear of center frame (one on each end). Install two 850-001-285 yellow-reflective tapes (arrow 1) on the outer front of center frame (one on each end).



Decal two 850-001-306 (arrow 4) on front side of toolbar (one on each end).



Decal two 81004136 Hiniker decal (arrow 11) on front side of toolbar between outer tillage unit u-bolt (one on each end).



Decal 81004129 6000 decal (arrow 12) between second outer tillage unit u-bolts (one on each end).

WARNING LIGHTS

NOTE: Right hand and left hand sides of your Strip-Till are determined by facing the direction that the Strip-Till travels while in use.

RIGID TOOLBARS

On the two outermost row units remove the 3/4 inch nuts and lockwashers from the outside u-bolts. Secure the right warning bracket to outermost u-bolt on the right end row unit with the 3/4 inch nuts and lockwashers. See page 70.

Secure the left warning light bracket to the outermost u-bolt on the left end row unit with the 3/4 inch nuts and lockwashers.

Attach the right warning light assembly to the left warning light bracket, (amber light to outside, red to inside) with (4) 1/4 x 1 1/4 bolts and whiz locknuts. Secure the cord carrier underneath the warning light bracket using the 1/4 x 1 1/4 bolts and whiz locknuts.

Start routing the lighting harness from the center of the toolbar.

Extend the 7 pin connector about 4 feet from the toolbar.

Run the right and left cables to the correct side of the implement securing the cable with the cable ties provided. Connect the end to the light assemblies and store any excess cable on the cord carrier.

FOLDING MODELS

Assemble the right warning light assembly (item 4) to the warning light bracket with the amber light to the top as shown on page 79. Use (4) 1/4 x 1 1/4 bolts and whiz locknuts.

Attach the cord carrier (item 14) to the back side of the warning bracket.

Assemble the left warning light assembly (item 3) to the warning light bracket with the amber light to the top as shown on page 79. Use (4) 1/4 x 1 1/4 bolts and whiz locknuts.

Attach the cord carrier (item 14) to the back side of the warning light bracket.

On the 6000 series folding toolbars use 3/4 x 9 1/2 inch bolts, (item 13 on page 79) (7 x 7 main) lock washers and nuts to secure the assemblies to the outermost holes in the toolbar as shown on page 74.

On the 6000 series folding toolbars (double 5 x 7 main toolbar), use 3/4 x 7 13/16 u-bolts (item 7 on page 79), lock washers and nuts to secure the assemblies to the outer most holes in the toolbar. See page 76.

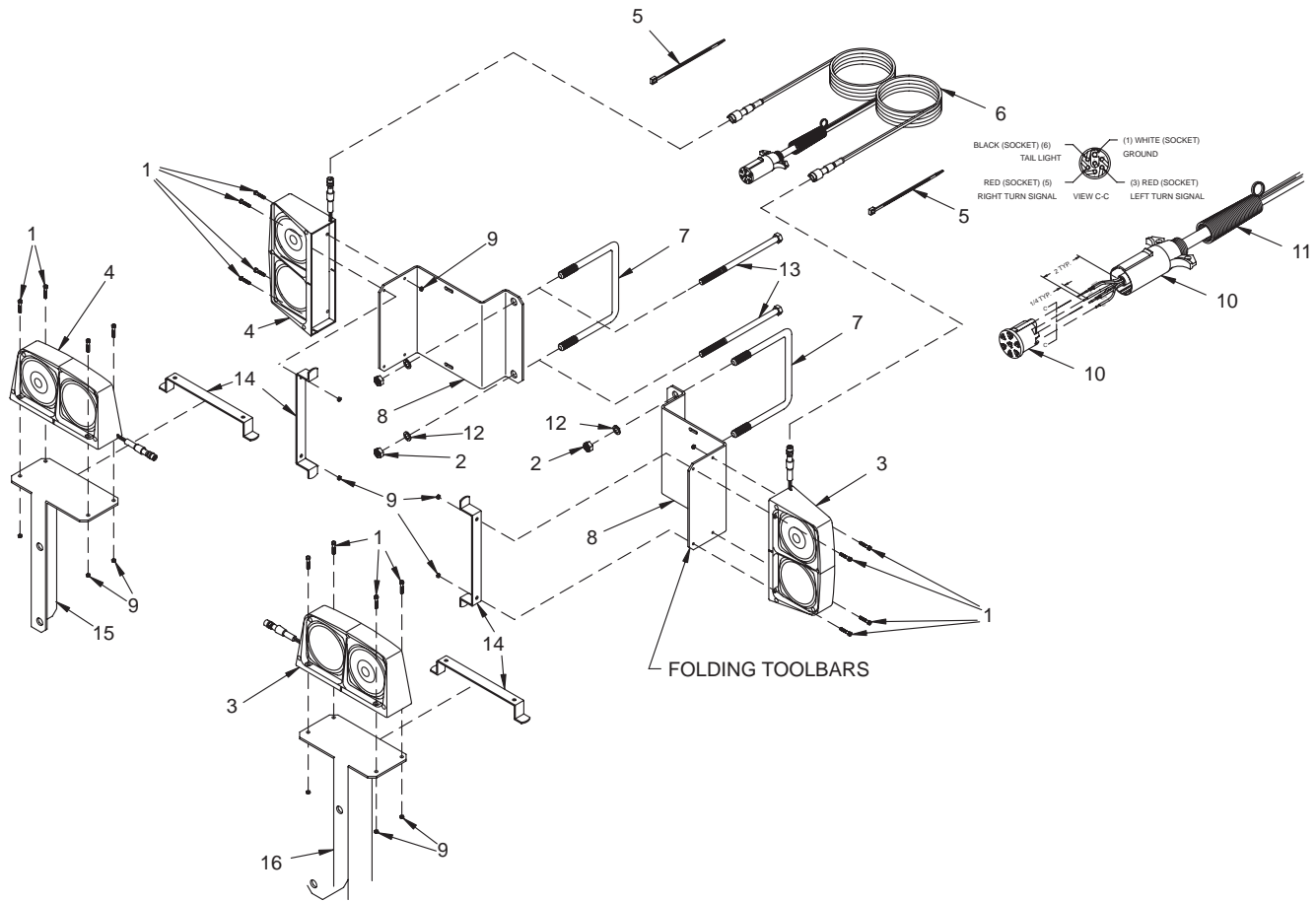
The light assemblies must be assembled on the front side of the toolbar. Refer to the row unit diagrams on pages 72, 74 And 76.

To attach the wiring harness to the 6000 folding toolbars, start with approximately 4 feet of cable extending beyond the tractor hitch point. Take the cable in the direction indicated by the label on the cables, one to the right and the other to the left, securing the cable as you go with tie straps.

Wrap the excess cable around the cord carrier and connect the warning light cable to the warning light assembly.

Connect the 7 pin plug to a tractor and check that all lights function as they are expected to. If they do not work, have your tractor dealer check out the receptacle on the tractor.

Warning Light 6000 Strip-Till



DWG. NO. 3601

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	031-06007	Hex Head Cap Screw 1/4 x 1 1/4 Gr. 5	8	9	034-05150	Lock Nut 1/4 Stover	8
2	951-001-009	Hex Nut 3/4-10	4	10	38450002	Connector Plug 7 Pin	1
3	36100000	Implement Light LH Assembly	1	11	38400004	Strain Relief Spring	1
4	36100001	Implement Light RH Assembly	1	12	952-001-006	Lock Washer 3/4 Med	8
5	921-001-145	Cable Tie Black 21 Inch	16	13	950-001-264	Hex Head Cap Screw 3/4-10 x 9 1/2 Gr. 5	4
6	38809029	Light Harness Cult 16' (Includes 10 & 11)	1	14	624960	Cord Carrier	2
	38817004	Light Harness Cult 23' (Includes 10 & 11)	1	15	81003527	RH Warning Light Bracket	1
7	875-001-035	U-Bolt 3/4 x 7 13/16 Center	2	16	81003528	LH Warning Light Bracket	1
8	81003404	Warning Light Bracket	2	17	81003529	Instruction Warning Lights (Not Shown)	1

For Single Hopper With 1 1/2" Hose Strip-Till Model

REMOTE RUN/HOLD

It may be necessary to readjust the sensor trip point to your individual preference after initial use.

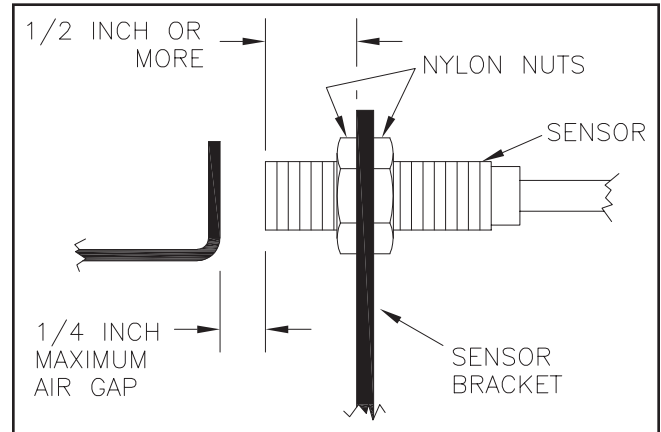
PURPOSE:

The remote Run/Hold Sensor, when properly adjusted, will control operation of the clutch as the toolbar is raised and lowered. This reduces the number of actions required by the operator on row ends.

INSTALLATION:

The remote Run/Hold bracket is installed on the outside of the top pivot shaft of the left parallel linkage assembly. Refer to the drawing and photo for proper placement and assembly.

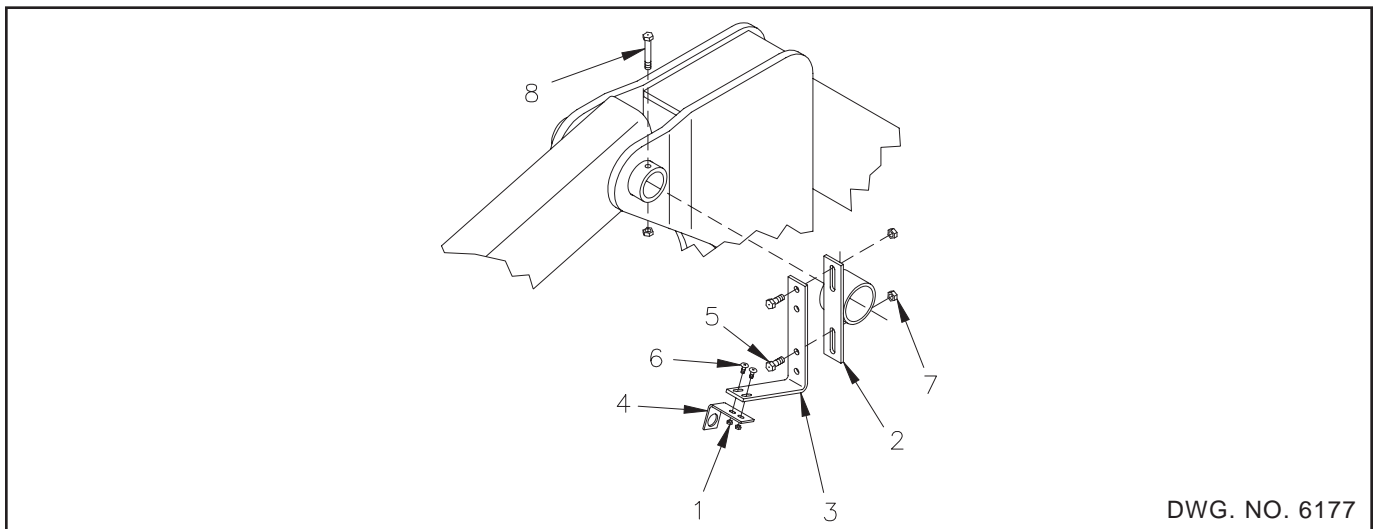
To install, first remove the bolt from the pivot shaft collar. Install the bracket onto the shaft, lining up the hole in the bracket with the hole in the shaft. It may be necessary to use a hammer and punch to make the alignment, as it is a tight fit. Insert the 3-inch bolt supplied with the kit into the hole and tighten using the nut that was removed previously. Install the two "L" brackets as shown but only hand tighten the hardware at this time. Install the sensor into the bracket according to drawing 5828. The sensor will cause the clutch to engage when metal is present on the face of the sensor. To adjust, raise the toolbar to a point where you want the clutch to disengage. Adjust the bracket to position the sensor just below the parallel linkage arm. Tighten all loose hardware. Recheck to make sure the sensor is no more than 1/4 inch from the arm with the arm lowered.



DWG. NO. 5828



PHOTO NO. DCP1497



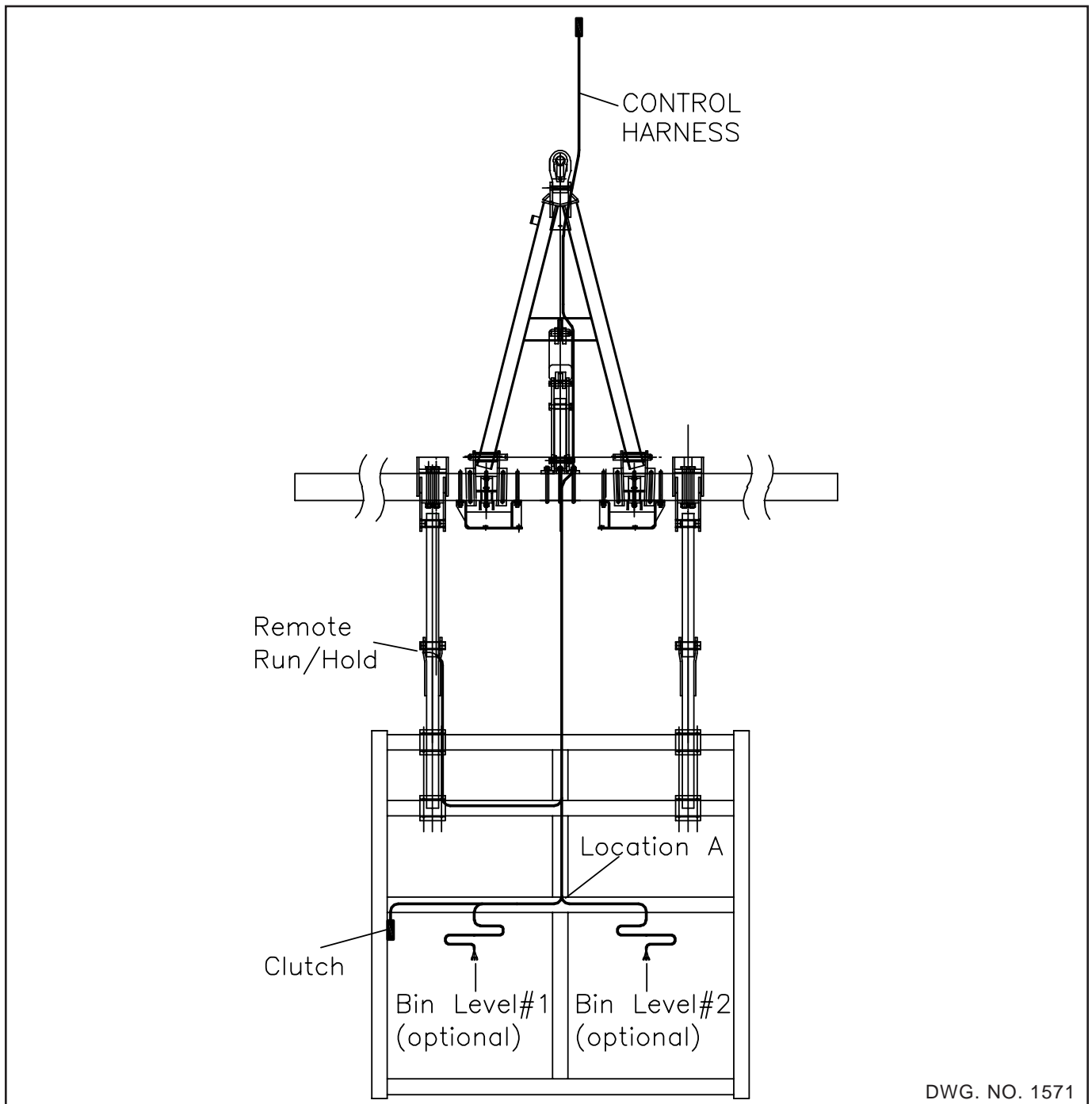
DWG. NO. 6177

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	951-002-008	Nut #10-32 Flanged Whiz Lock	2	5	950-001-113	Hex Head Cap Screw 5/16-18 x 3/4 Gr. 5	2
2	81005444	Mount Weldment	1	6	950-004-097	Mach Screw #10-32 x 1/2 Phillips Pan head	2
3	81005445	Mount Strap	1	7	951-002-002	Nut 5/16-18 Flanged Whiz Lock	2
4	81005587	Sensor Mount Bracket	1	8	031-06063	Hex Head Cap Screw 5/16-18 x 3 Gr. 5	1

CONTROL HARNESS

Route the control harness from the tractor hitch back to the cross member at the rear of the tank as shown in the drawing. The breakout of the harness to the clutch and the two optional bin level sensors page 80 should be at the junction of the center frame and cross member (Location A). Using the supplied wire ties secure the harness to the frame. Route the clutch cable to the clutch and secure.

If not using the optional bin level sensors then secure the loose ends to the cross member to prevent them from becoming entangled or damaged. The breakout cable for the remote Run/ Hold is routed across to the left parallel linkage arm, then up the arm to the Run/ Hold Sensor. The main harness section is routed to the tractor hitch by following the hydraulic hoses. Secure all wires with wire ties to prevent them from becoming entangled or damaged.



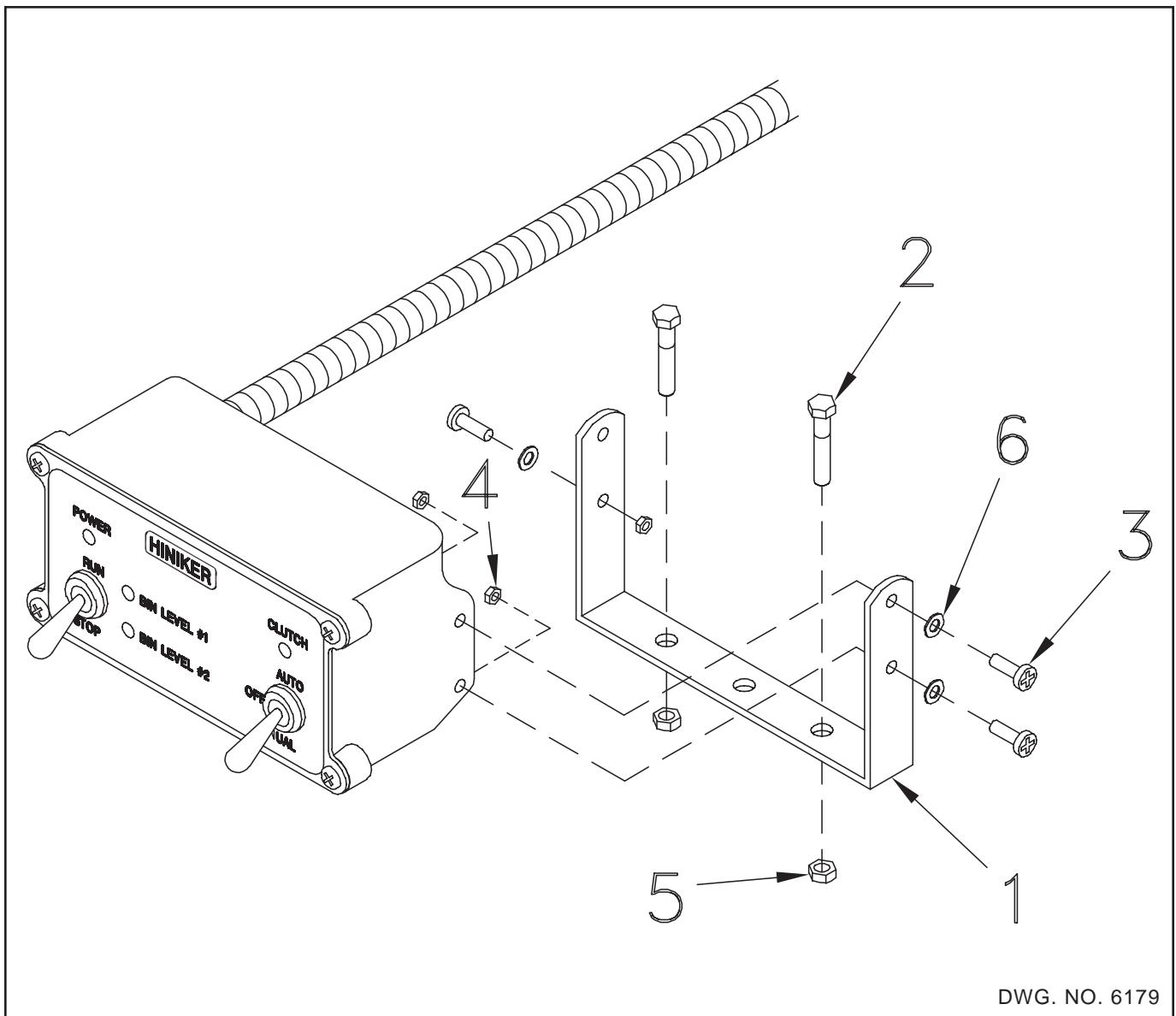
For Single Hopper With 1 1/2" Hose Strip-Till Model And Ground Driven Metering Systems

CONSOLE INSTALLATION

Select an easily accessible area in the tractor cab to mount the control console. Mount the bracket to the cab using the 1/4-20 bolts and nuts. Mount the console to the bracket using the #8-32 bolts and nuts.

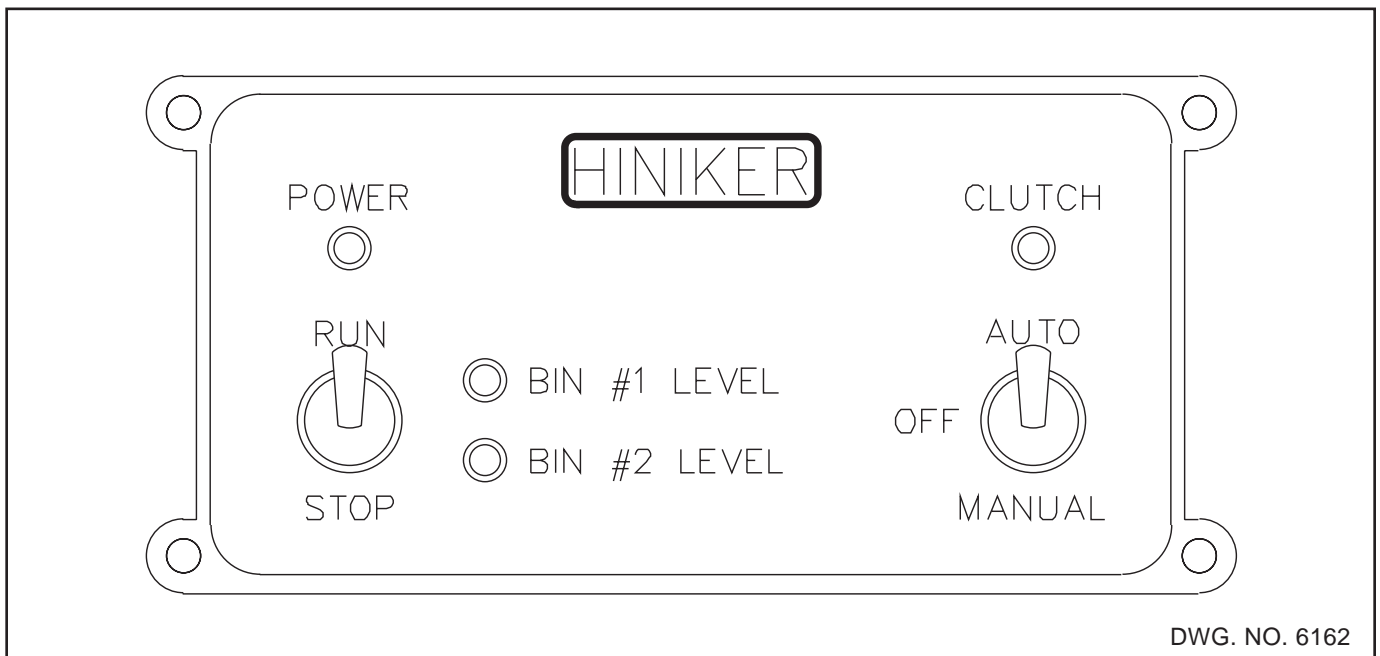
Route the main cable back to the Tractor hitch area where it will be connected to the Strip-Till control harness.

Connect the Red and black wires to a 12-volt power source. We recommend that you connect them directly to the battery. The Red wire connects to the positive post and the Black wire to the negative post. The Red wire is fused at 10 amps. Do not replace with a larger value fuse to prevent damage to the console. The Red and Black power wires may be cut to length suitable for your particular installation



DWG. NO. 6179

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	79201699	Mount Bracket	1	4	951-001-012	Hex Nut #8-32	3
2	950-002-004	Hex Head Flanged Whiz Lock Bolt 1/4-20 x 1	2	5	951-002-001	Nut 1/4-20 Flanged Whiz Lock	3
3	950-004-069	Mach Screw #8-32 x 1/2 Phillips Pan head	3	6	952-004-033	Lock Washer #8 Internal Star	3



CONSOLE OPERATION

The console consists of three main areas. The power switch, the clutch switch and the bin level indicators.

The power switch will supply power to the clutch and bin level sensors when placed in the RUN position. The POWER indicator will be lit green when power is present. The power switch must be in the RUN position for the clutch or bin level sensors to operate. When not in use or when working around the implement the switch should be placed in the OFF position.

The clutch AUTO/OFF/MANUAL switch controls the clutch operation. In the OFF position power to the clutch is removed causing it to disengage.

In the MANUAL position the clutch will stay on. To turn the clutch off, move the switch to the OFF position.

If the AUTO position is selected then the remote Run/Hold sensor will determine whether the clutch is on or off. The clutch will be on when the parallel linkage arm is present on the face of the sensor (tool bar lowered).

The console has status indicators for two Bin Level Sensors. The Bin Level Sensors are optional equipment. When the power switch is first placed into the RUN position the console checks for the sensors. The red bin level indicators will flash a couple of times during this time. If the sensor(s) are not present then the indicators will turn off. If the sensor(s) are connected later the power switch will need to be turned off then back on to allow the console to identify them.

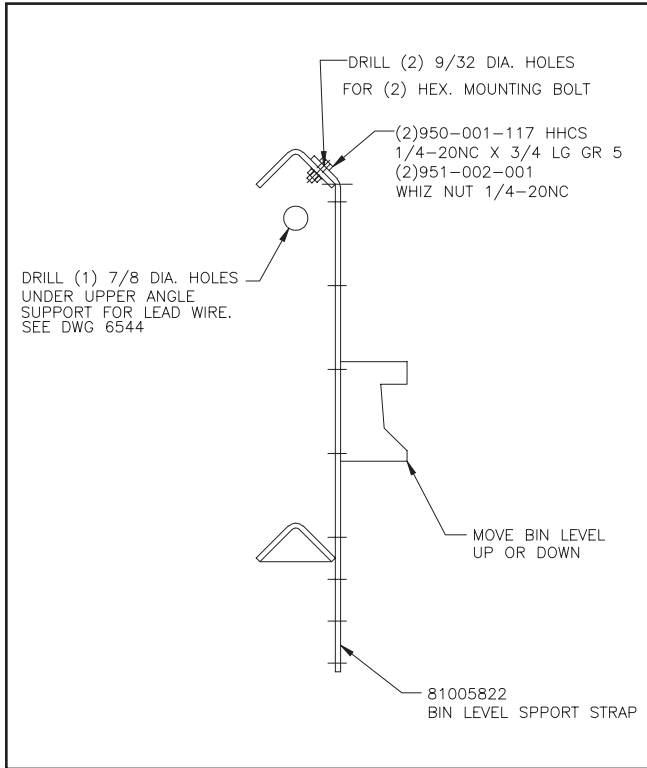
If the console identifies the sensors as being present then the indicator lights will either be on steady or flash depending on the material level in the tank.

If the sensor is covered by material in the tank, the indicator will be on steady.

If there is no material covering the sensor, the light will continue to flash indicating a low bin level.

For Single Or Split Hopper Strip-Till Models

This kit includes a single Bin Level Sensor, the mounting bracket, and the necessary hardware for installation in the Hiniker Strip-Till dry cart hopper. Refer to drawing no. 6284



DWG. NO. 6284

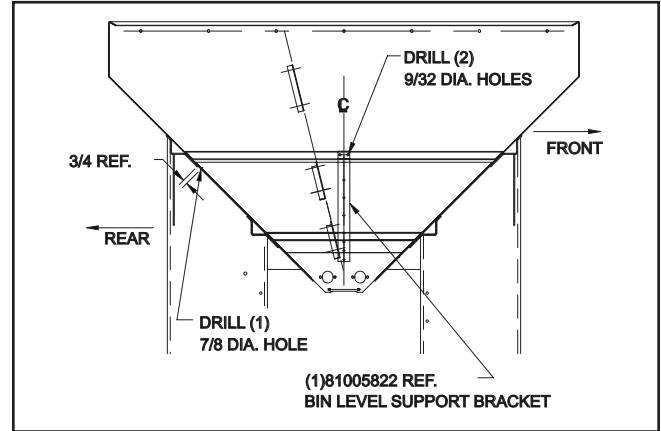
The Bin Level Sensor should be installed in the hopper at a height which will give the operator a bin level warning before the hopper is completely empty. The location is determined by how much material you want left in the hopper when the warning is sounded.

The location of the sensor should be at the point where it will be uncovered when the desired amount of material is left in the hopper.

INSTALLATION - SINGLE HOPPER

The Mounting Bracket is intended to be installed onto one of the two upper angle supports and can be located either on the left half or right half of the hopper. Multiple sensors may be installed,

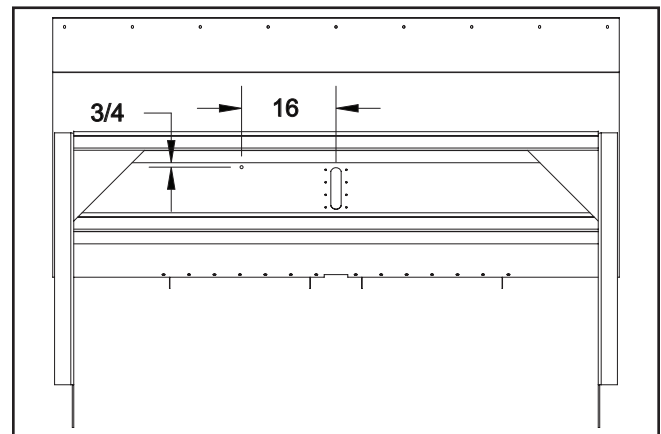
one in each hopper half or two sensors on the same bracket to detect two levels.



DWG. NO. 6543

Refer to drawing 6543 to determine sensor bracket mounting location, use the mounting bracket as a guide and drill two 9/32 inch mounting holes in the upper angle support. Use (2) 1/4-20 x 3/4 bolts and (2) 1/4-20 whiz lock nuts to secure the mounting bracket to the upper angle support.

Determine the proper height for the Sensor, install the Bin Level Sensor to the bracket making sure the UP (arrow) is pointing up. Secure the sensor to the bracket using the flat washers, lock washers, and wing nuts supplied.



DWG. NO. 6544

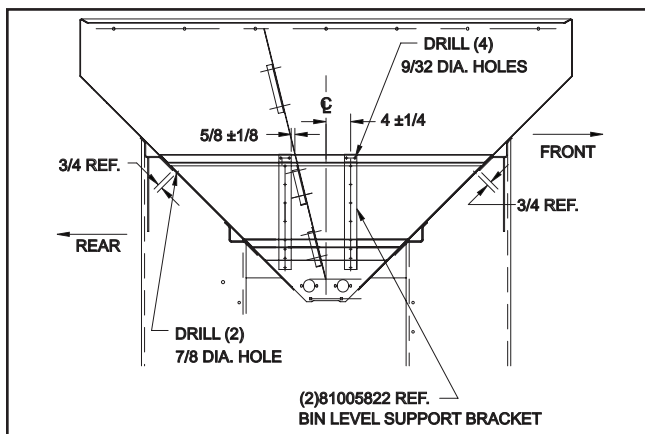
Refer to drawing 6544 for cable exit hole placement. Mark, then drill a 7/8 inch hole for the sensor cable to exit the hopper. Make sure to remove all burrs. It should be located directly under the upper brace for protection. On single bin hoppers the hole(s) are placed on the rear.

Route the sensor cable through the 7/8 inch hole and secure by pushing the grommet into the hole. Secure the cable to the upper angle support using wire ties.

INSTALLATION - DUAL HOPPER

Two Bin Level Sensor Kits are required on dual hopper carts.

The Mounting Bracket is intended to be installed onto one of the two upper angle supports and can be located either on the left half or right half of the hopper.



DWG. NO. 6542

Refer to drawing 6542 to determine the sensor bracket mounting location. Use the mounting bracket as a guide and drill two 9/32 inch mounting holes in the upper angle support. Use (2) 1/4-20 x 3/4 bolts and (2) 1/4-20 whiz lock nuts to secure the mounting bracket to the upper angle support.

Determine the proper height for the Sensor, install the Bin Level Sensor to the bracket making sure the UP (arrow) is pointing up. Secure the sensor to the bracket using the flat washers, lock washers, and wing nuts supplied.

Refer to drawing 6544 for cable exit hole placement. Mark, then drill a 7/8 inch hole for the sensor cable to exit the hopper. Make sure to remove all burrs. It should be located directly under the upper brace for protection. On dual hopper carts the hole(s) are placed, one to the front, and one to the rear.

Route the sensor cable through the 7/8 inch hole and secure by pushing the grommet into the hole. Secure the cable to the upper angle support using wire ties.

HINIKER CLUTCH CONTROL BOX

If using the Hiniker clutch control box with bin level, connect the three connectors to the mating connectors on the wiring harness. Match up the Black to Black and Red to Red wires. Connect the Yellow wire for Bin Level 1 to the sensors Green wire. Connect the Green wire for Bin Level 2 to the sensors Green wire.

Secure all excess cables lengths to prevent them from damage.

Refer to the Operator Manual for the proper operation of the Bin Level indicators located on the control console.

For Split Hopper With Variable Drive 2" Hose Strip-Till Model Implement On/Off Switch Mounting

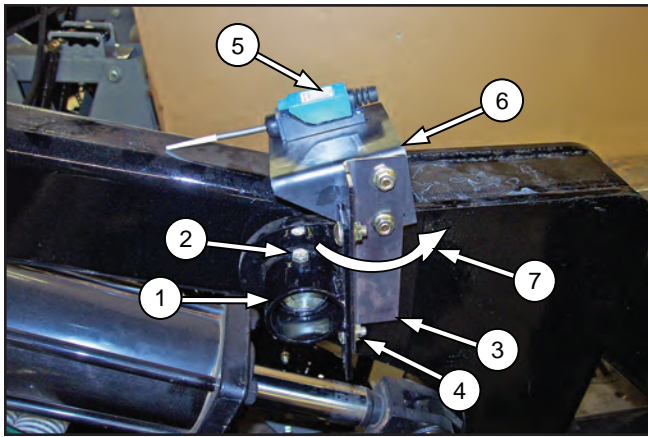


PHOTO NO. DCP2381A

Remove hex bolt 5/16-18 x 2 3/4" at top rear mast pin. Install mount weldment (Arrow 1) over pin sleeve using one 5/16-18 x 3" Grade 5 hex bolt (Arrow 2) with 5/16" 2-way lock nut.

Install vertical mount bracket (Arrow 3) with 5/16-18 x 3/4" carriage bolts (Arrow 4) with 5/16" whiz lock nuts. Install switch (Arrow 5) using four #10-32 machine screws onto top mount bracket (Arrow 6), then install two 5/16-18 x 1/2" carriage bolts and 5/16" whiz lock nuts.

Note: Adjust vertical height at (Arrow 4) and angle at (Arrow 7).

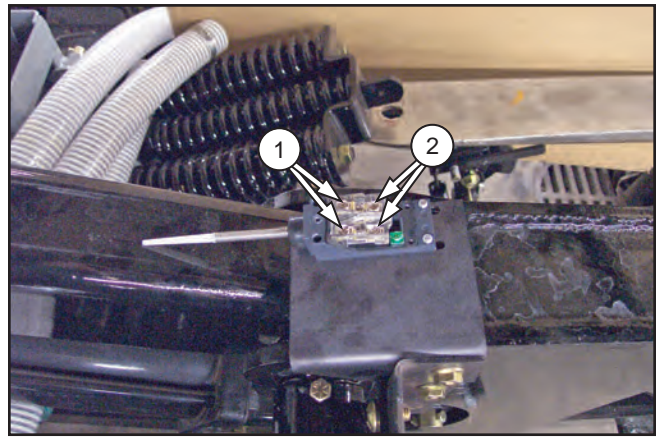


PHOTO NO. DCP2389A

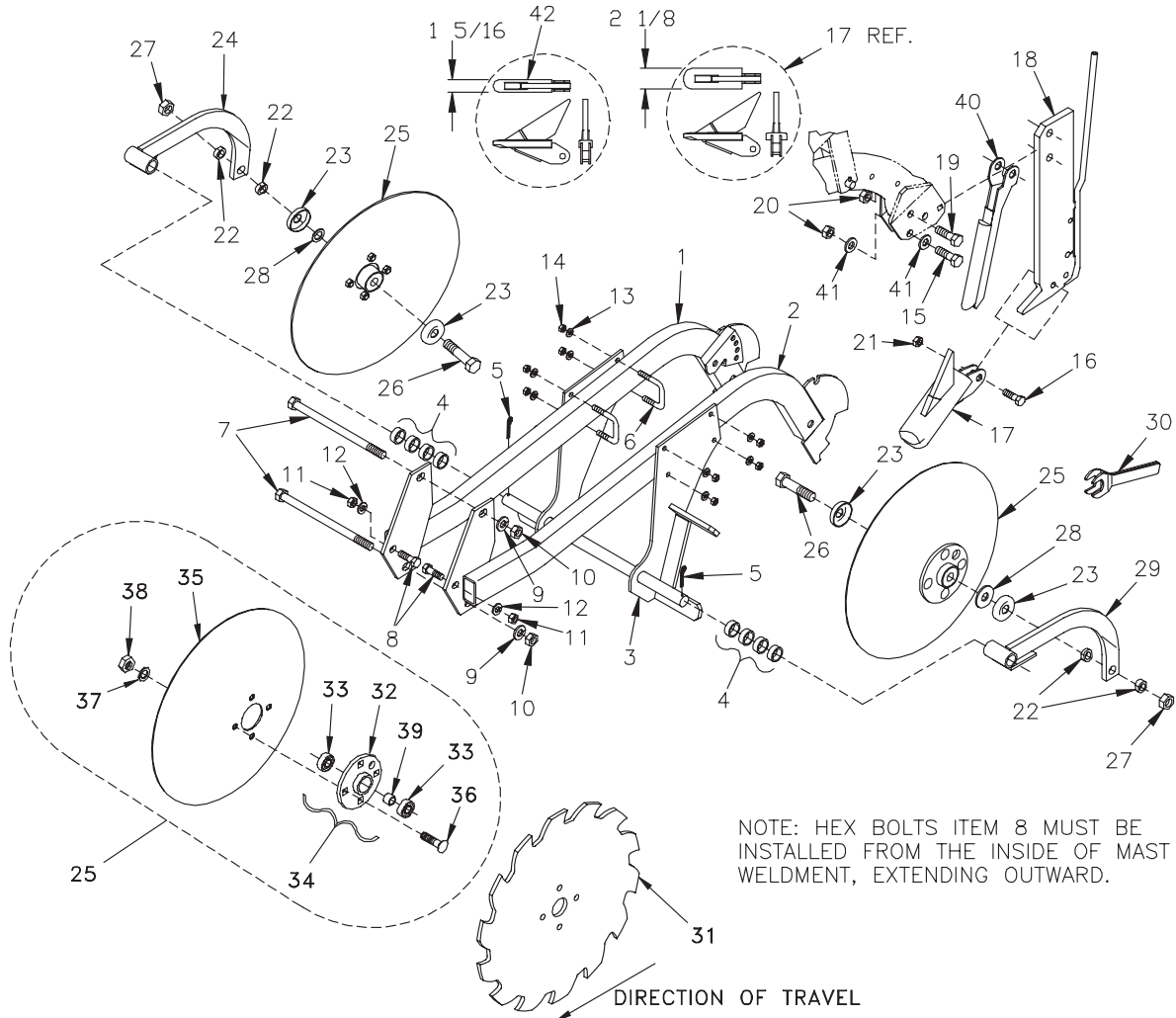
Loosen cover screws and remove cover. This switch can be set up normally open or closed system.

Terminal screws (Arrow 1) for normally open.

Terminal screws (Arrow 2) for normally closed.

Reinstall cover after wire installation is complete.

81005898 Tillage Unit Assembly

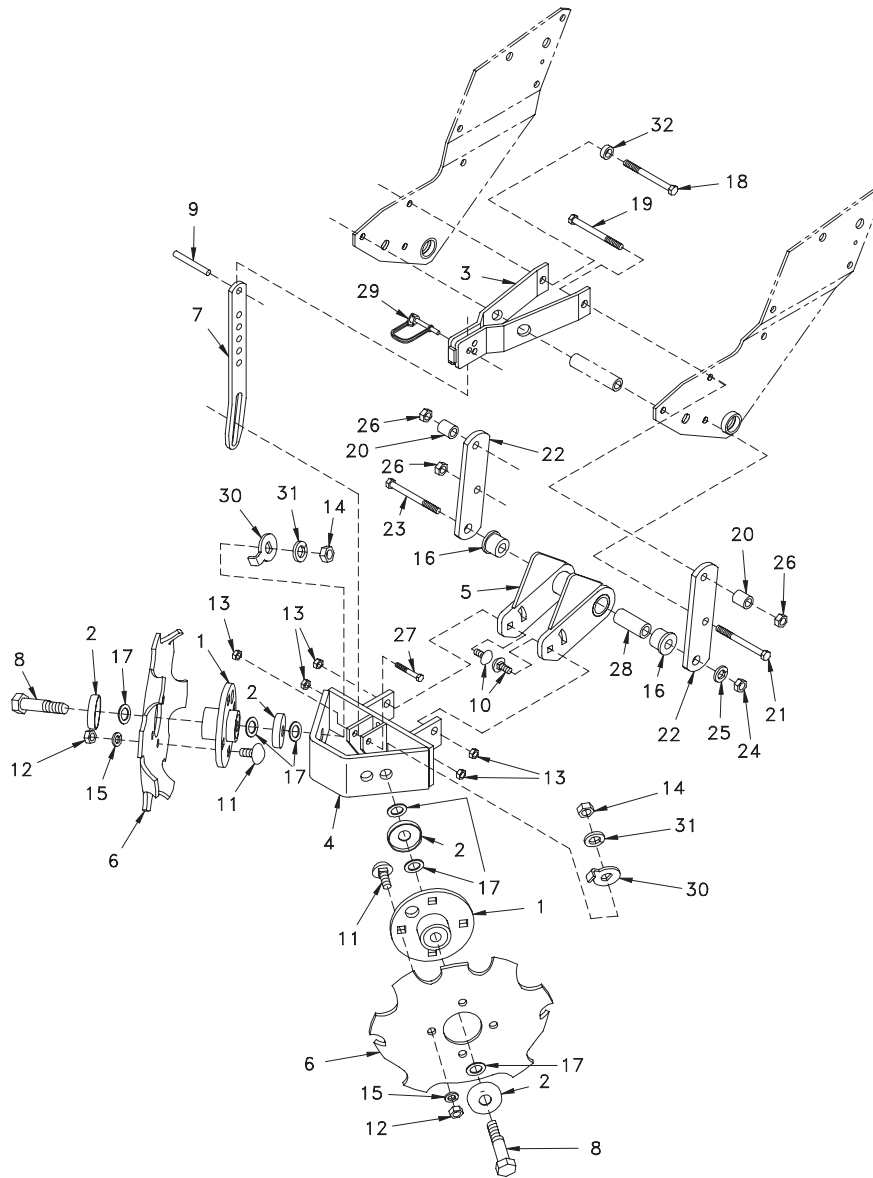


Note: See 81006067 19" Notch Poly Disc Kit On Page 90.

DWG. NO. 6651

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005907	RH Side Tube Weldment	1	22	81005256	Angle Washer	4
2	81005906	LH Side Tube Weldment	1	23	81004802	Dust Cap	4
3	81005922	Support Weldment	1	24	81004921	RH Arm Weldment	1
4	81005921	Spacer 1/2 Long	8	25	81004926	Concave Disc 18" W/Hub Assembly	2
5	953-001-020	Cotter Pin 3/16 x 2 1/2	2	26	062060	Hex Head Cap Screw 3/4-10 x 4 1/4 Gr. 5	2
6	81005927	U-Bolt 3/8-16 x 2 7/8 Center	4	27	951-005-037	Lock Nut 2-Way 3/4-10	2
7	950-001-181	Hex Head Cap Screw 5/8-1 x 8 1/2 Gr. 5	2	28	952-004-003	Machine Bushing 49/64 x 1 1/4 x .075	2
8	950-001-111	Hex Head Cap Screw 1/2-13 x 1 1/4 Gr. 5	2	29	81004922	LH Arm Weldment	1
9	952-001-005	Lock Washer 5/8 Med Split SAE	2	30	81005412	Wrench Weldment (Optional)	1
10	951-001-008	Hex Nut 5/8-11	2	31	81006067	19" Notched Poly Disc Kit (Optional)	1
11	951-001-007	Hex Nut 1/2-13	2	32	81004410	4 Bolt Hub Weldment	1
12	952-001-004	Lock Washer 1/2 Med Split SAE	2	33	600-02009	Ball Bearing .7500 Bore	2
13	952-001-007	Lock Washer 3/8 Med Split SAE	8	34	81004407	Hub With Bearing Assembly	1
14	951-001-005	Hex Nut 3/8-16	8	35	81004918	Concave Disc 18"	1
15	950-001-024	Hex Head Cap Screw 5/8-11 x 2 1/2 Gr. 8	1	36	950-003-028	Carriage Bolt 1/2-13 x 1 1/4 Gr. 5	4
16	950-001-125	Hex Head Cap Screw 1/2-13 x 1 1/2 Gr. 5	1	37	952-001-004	Lock Washer 1/2 Inch	4
17	81005917	Point Weldment	1	38	951-001-007	Hex Nut 1/2-13	4
18	81005914	Straight Shank Weldment	1	39	81004409	Spacer	1
19	950-001-023	Hex Head Cap Screw 5/8-11 x 2 Gr. 5	1	40	81006101	Wear Edge Weldment	1
20	951-005-044	Lock Nut 2-Way 5/8-11	2	41	952-002-007	Flat washer 5/8 Inch	2
21	10304	Lock Nut 2-Way 1/2-13	1	42	81006132	Narrow Cast Point Weldment	1

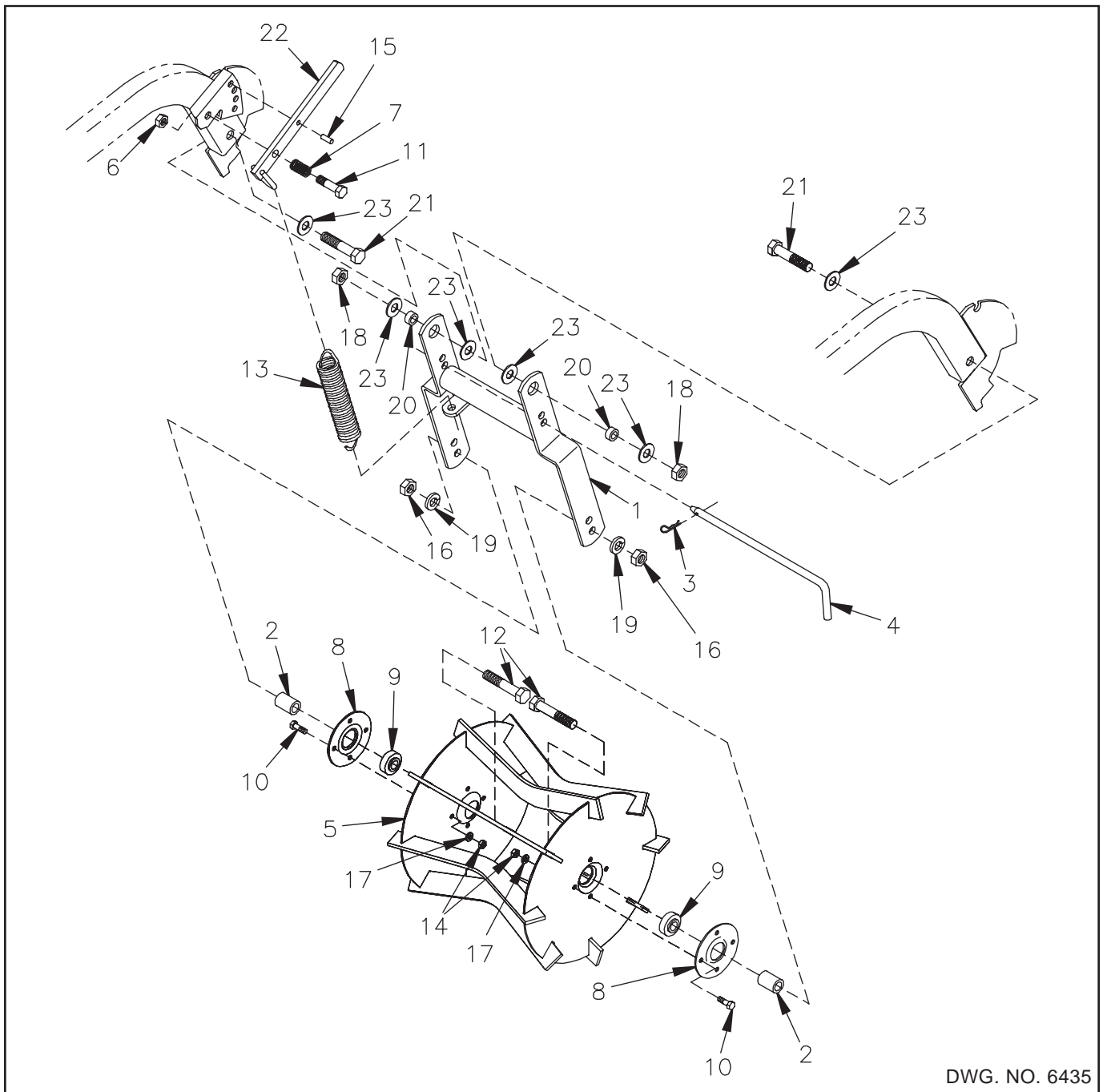
81005129 Adjustable Row Cleaner Assembly



DWG. NO. 5864

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81004407	Hub With Bearing Assembly	2	17	952-004-079	Machine Bushing 25/32 x 1 1/4 x .075 Hardened	6
2	81004802	Dust Cap	4	18	950-001-075	Hex Head Cap Screw 1/2-13 x 3 Gr. 5	1
3	81005124	Top Anchor Plate Weldment	1	19	950-001-159	Hex Head Cap Screw 1/2-13 x 2 1/2 Gr. 5	1
4	81005243	Push Frame Weldment	1	20	81005006	Tube	2
5	81005321	Push Strap Weldment	1	21	031-06219	Hex Head Cap Screw 1/2-13 x 6 Gr. 5	1
6	81004935	Notched Disc 12"	2	22	81005011	Mount Strap	2
7	81005884	Pull Strap	1	23	950-001-161	Hex Head Cap Screw 5/8-11 x 6 Gr. 5	1
8	81005816	Locking Hex Bolt	2	24	951-001-008	Hex Nut 5/8-11	1
9	953-003-025	Slotted Spring Pin 3/8 x 3 Inch	1	25	952-001-005	Lock Washer 5/8 Med Split SAE	1
10	950-003-007	Carriage Bolt 3/8-16 x 1 1/4 Gr. 5	4	26	10304	Lock Nut 1/2-13	3
11	950-003-028	Carriage Bolt 1/2-13 x 1 1/4 Gr. 5	8	27	950-001-114	Hex Head Cap Screw 3/8-16 x 2 Gr. 5	1
12	951-001-007	Hex Nut 1/2-13	8	28	81005007	Spacer	1
13	951-005-003	Hex Lock Nut 3/8-16 Mac Lock	5	29	81005172	Safety Snap Pin 3/8 x 1 3/4	1
14	951-001-009	Hex Nut 3/4-10, 2-Way	2	30	81005815	Locking Tab	2
15	952-001-004	Lock Washer 1/2 Med Split SAE	8	31	952-001-006	Lock Washer 3/4	2
16	80504335	Flange Bushing	2	32	81005951	Tube	1

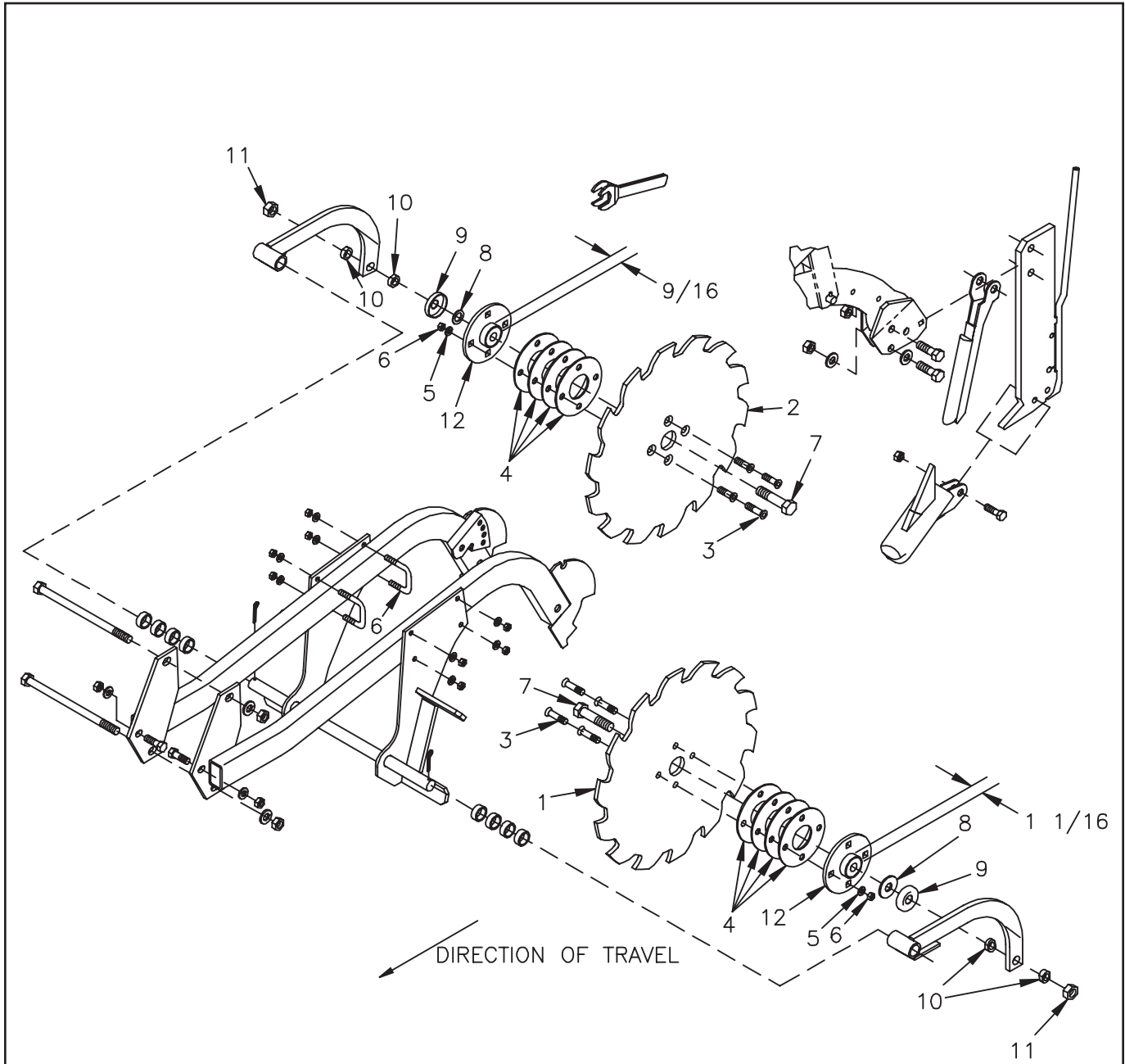
81005899 13" Wide Rolling Basket Assembly



DWG. NO. 6435

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81005932	Mount Strap Weldment	1	13	805-003-214	Spring	1
2	81004937	Spacer	2	14	951-001-004	Hex Nut 5/16-18	8
3	953-005-003	Cotter Pin Hair .148 x 2 3/4	1	15	953-003-013	Slotted Spring Pin 5/16 x 7/8	1
4	81005931	Pin	1	16	951-001-008	Hex Nut 5/8-11	2
5	81004945	Basket Weldment	1	17	952-001-002	Lock Washer 5/16 Med Split SAE	8
6	10304	Lock Nut 1/2-13	1	18	951-005-044	Lock Nut 5/8-11, 2-Way	2
7	80305696	Compression Spring	1	19	952-001-005	Lock Washer 5/8 Med Split SAE	2
8	875-001-006	Bearing Retainer	2	20	81005928	Sleeve Bearing	2
9	875-001-007	Wheel Bearing	2	21	950-001-141	Hex Head Cap Screw 5/8-11 x 3 Gr. 5	2
10	950-001-110	Hex Head Cap Screw 5/16-18 x 1 Gr. 5	8	22	81005929	Handle Weldment	1
11	950-001-112	Hex Head Cap Screw 1/2-13 x 2 Gr. 5	1	23	952-002-007	Standard Flat Washer 5/8 Inch	6
12	950-001-162	Hex Head Cap Screw 5/8-11 x 3 1/4 Gr. 5	2				

81006067 19" Diameter Notched Poly Disc Kit



81006067 Notched Poly Disc Kit Consist Of These Parts*

DWG. NO. 6514

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81006065*	RH 19" Diameter Notched Poly Disc	1	7	062060	Hex Head Cap Screw 3/4-10 x 4 1/4 Gr. 5	2
2	81006066*	LH 19" Diameter Notched Poly Disc	1	8	952-004-003	Machine Bushing 49/64 X 1 1/4 x .075	2
3	700-20091*	Hex Socket Flat Head 1/2-13 x 1 3/4 Gr. 5	8	9	81004802	Dust Cap	2
4	805-001-015*	Back Up Washer	8	10	81005256	Angle Washer	4
5	952-001-004	Reuse These Parts 5 Thru 12	8	11	951-005-037	Lock Nut 3/4-10 2-Way	2
6	951-001-007	Lock Washer 1/2	8	12	81004407	Hub W/Bearing Assembly	2
		Hex Nut 1/2-13	8				

HINIKER WARRANTY

The only warranty Hiniker Company (Hiniker) gives and the only warranty the dealer is authorized to give is as follows:

We warranty new products sold by Hiniker or authorized Hiniker dealers to be in accordance with our published specifications or those specifications agreed to by us in writing at time of sale. Our obligation and liability under this warranty is expressly limited to repairing or replacing, at our option, within one year after date of retail delivery, to the original purchaser, any product not meeting the specification. **WE MAKE NO OTHER WARRANTY, EXPRESS OR IMPLIED AND MAKE NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE.** Our obligation under this warranty shall not include any transportation charges or costs or any liability for direct, indirect or consequential damage or delay. If requested by Hiniker Company, products or parts for which a warranty claim is made are to be returned freight prepaid to our factory. Any improper use, operation beyond rated capacity, substitution of parts not approved by Hiniker Company, or any alteration or repair by others in such manner as in our judgement affects the product materially and adversely shall void this warranty. **NO EMPLOYEE OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY.**

HINIKER reserves the right to make improvement changes on any of our products without notice.

HINIKER does not warrant the following:

1. Used products
2. Any product that has been repaired modified or altered in a way not approved by Hiniker Company.
3. Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow Operator Manual Instructions, misuse, lack of proper protection during storage, or accident.
4. Parts replacement and service necessitated by normal wear or maintenance including, but not limited to, belts, cutting parts, and ground engaging parts.
5. Breakage or damage caused by rocks.

A DELIVERY REPORT - warranty registration form must be filled out and returned to Hiniker Company to initiate the warranty within 30 days of retail sale. Failure to complete the form will void the warranty.

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