DECLARATION OF MARK MILLER

I, Mark Miller, declare as follows:

1. I am an Inside Sales Manager at Hiniker Company. I have worked at Hiniker since 1974.

2. I have personal knowledge of the following matters and, if necessary, could testify about them.

3. Attached as Appendix A is a true and correct copy of Hiniker Assembly Manual - Part Number 80504785 REV A. A copy of this manual was distributed to each purchaser of the Hiniker 4800 Air Seeder S/N - 104 between [Jan 2, 2001] and [March 16, 2004]. For example, a copy of the manual was distributed to Puthoff Repair Sales & Service on January 31, 2001, when Hiniker shipped a 4833 Air Seeder (S/N 4836-0085-104) to Puthoff. A true and correct copy of Puthoff's order form, dated September 26, 2000, and Hiniker's corresponding invoice, dated January 31, 2001, are attached as Appendices B and C.

I declare under penalty of perjury of the laws of the United States of America that the foregoing is true and correct.

Date: [August 1, 2024]



Mark Miller

APPENDIX A

HINIKER

MODELS 4831, 4832, & 4833
AIR SEEDER CART WITH
4800 AIR SEEDER
FRONT FOLDING TOOLBAR
S/N - 104

ASSEMBLY MANUAL

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

PART NUMBER 80504785 REV A

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80504785 REV A **01/2001** **FN #1023,#E1060/4831-ASM**

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SAFETY

THIS IS THE SAFETY ALERT SYMBOL. IT ALERTS AN OPERATOR TO INFORMATION CONCERNING PERSONAL SAFETY. ALWAYS OBSERVE AND HEED THESE SYMBOLS AND INSTRUCTIONS, OTHERWISE DEATH OR SERIOUS INJURY CAN RESULT!

Operator safety is a principle concern in equipment design and distribution. However, many accidents occur because a few seconds of thought, and a more careful approach to handling, were ignored.

ACCIDENTS CAN BE AVOIDED BY KNOWING, AND FOLLOWING, THE PRECAUTIONS CITED IN THIS MANUAL.

For better viewing, certain photos may show a safety shield open or removed. This equipment should never be operated without factory installed shields in place.

Replace any decals that are not readable, or missing. Their ordering numbers and proper location are shown in the DECAL LOCATION section of the operators manual. Keep decals free of dirt, grease, etc.

Throughout this manual, and on all safety related decals, a safety alert symbol along with the signal word **CAUTION**, **WARNING**, **or DANGER** will be found. These are defined as follows:

CAUTION: A REMINDER FOR PROPER SAFETY PRACTICES AND DIRECTS ATTENTION TO FOLLOWING THEM. DECALS OF THIS CLASS ARE YELLOW AND BLACK.

WARNING: A REMINDER FOR PROPER SAFETY PRACTICES AND WHAT CAN HAPPEN IF THEY ARE IGNORED. THIS HAS A MORE SERIOUS CONSEQUENCE THAN CAUTION. DECALS OF THIS CLASS ARE ORANGE AND BLACK.

DANGER: DENOTES A MOST SERIOUS SAFETY HAZARD. IT IS A REMINDER FOR OBSERVING THE STATED PRECAUTIONS AND WHAT CAN HAPPEN IF THEY ARE IGNORED. DECALS OF THIS CLASS ARE RED AND WHITE.

There are other decals and copy in this manual that pertain to protecting the equipment. They are not directly related to operator safety. These have black letters on a white background to distinguish them from safety decals. They lack the safety alert symbol, but carry the words NOTICE or **IMPORTANT** defined as follows:

IMPORTANT: Warns the reader of potentially more serious machine damage, or poor performance if ignored.

NOTICE: INFORMS THE READER OF SOMETHING THAT CAN CAUSE MINOR MACHINE DAMAGE, OR POOR PERFORMANCE IF IGNORED.

GENERAL

1. Additional copies of this manual are available from your HINIKER dealer. If you sell this equipment, ensure that the new owner acknowledges receipt of the operators manual.

2. Read this manual thoroughly. Make sure the operator understands it and knows how to assemble and operate this equip-

ment safely. Farm equipment can kill or injure an untrained, or careless operator.

3. Do not attempt to handle and service this equipment, or direct others to do the same, unless you know how to do it safely.

4. Keep all shields and guards in place.

5. Keep hands, feet, hair and clothing away from moving parts.

6. STOP tractor engine, set brakes and wait for all motion to stop before adjusting, or servicing this equipment.

7. Keep off, keep others off, and ensure everyone is clear before starting, actuating hydraulics, and during equipment operation.

8. Do not service or otherwise handle a 4800 Air Seeder in a raised position unless it is securely blocked against falling.

9. Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.

   - DO NOT use your hand to check for leaks. Use a piece of cardboard.

   - Stop tractor and relieve pressure before connecting/disconnecting lines.

   - Tighten all connections before pressurizing hydraulic lines.

   - If fluid is injected into the skin, get medical attention immediately to prevent serious infection.

10. Discipline yourself to always visually inspect this equipment for any excessively worn, damaged, or cracked parts before starting use. Replace these with genuine HINIKER parts.

11. OSHA requires farm employers to meet certain safety standards. Become familiar with, and comply with them.

12. 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 52 of the operators manual for transport height and width specifications.

13. Reduce tractor speed when transporting over uneven or rough terrain.

14. When transporting down steep hills or slopes, shift tractor into lower gear.

15. Do not alter this equipment to the extent of compromising safety and performance.

16. Do not substantially operate tractor in a closed building.

17. Agricultural chemicals can be dangerous. Always follow the manufacturer's label safety precautions when using them.

18. Do not assume everyone is as safety conscious as yourself.

BEFORE OPERATION

1. NEVER allow improperly supervised minors, or anyone else, to operate this equipment. It is your responsibility to ensure that any operator is mentally and physically capable of doing so.

2. Do not "jump start" the tractor from along side it. Start tractor only from seat.

3. Never operate wing lift cylinders on folding models without (4) restrictor fittings, one at each end of lift cylinders.

DURING OPERATION

1. Stop tractor engine, remove key and allow EQUIPMENT TO COME TO A COMPLETE STOP before:

   - Cleaning, unclogging, lubricating, inspecting, or otherwise servicing, any part of this equipment.

   - Connecting or disconnecting the cultivator from the tractor.

   - Allowing anyone else near the equipment.

   - Dismounting from the tractor seat and parking the equipment.

2. Never operate 4800 Air Seeder without having safety chain properly in place between tractor and trailer.

3. 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.

4. Check all controls and operating functions of the machine in a safe area before starting to work.

5. Never fold toolbar wings forward when others are standing on the trailer or catwalk.

6. Before disconnecting lines, be sure to relieve all pressures to the system.

TOWING

1. When towing on public highways:

   - Use a tractor of sufficient size, and weight, required for field operation.

   - Do not transport faster than 25 MPH (40 kph).

2. Keep away from overhead power lines. Serious injury or death may result. Know transport height and width of your machine.

3. Always fold wings fully and close transport lock-up valve.

4. Latch tractor brakes together.

5. Shift the tractor into a lower gear when transporting down steep slopes or hills. Stop slowly.

6. Keep the SMV emblem and reflectors clean and visible from the rear.

7. Make sure the amber reflectors are clean and visible from the front.

8. Use headlights, flashing warning lights and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and markings visible and in good working order.

SERVICE

1. Service information herein is intended for dealers and others correspondingly competent. If you are not experienced and/or capable of handling such service, do not attempt it.

2. Stop tractor engine, remove key and allow EQUIPMENT TO COME TO A COMPLETE STOP before:

   - Cleaning, unclogging, lubricating, inspecting, or otherwise servicing, any part of this equipment.

   - Connecting or disconnecting the field cultivator from the tractor.

   - Allowing anyone else near the equipment.

3. Securely support any machine element that must be raised for service work.

4. Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any build up of grease, oil, or debris.

REMEMBER-ACCIDENT PREVENTION IS PART OF YOUR JOB!

ASSEMBLY

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 ± 20 percent tolerance is to be used when a single value torque is specified.

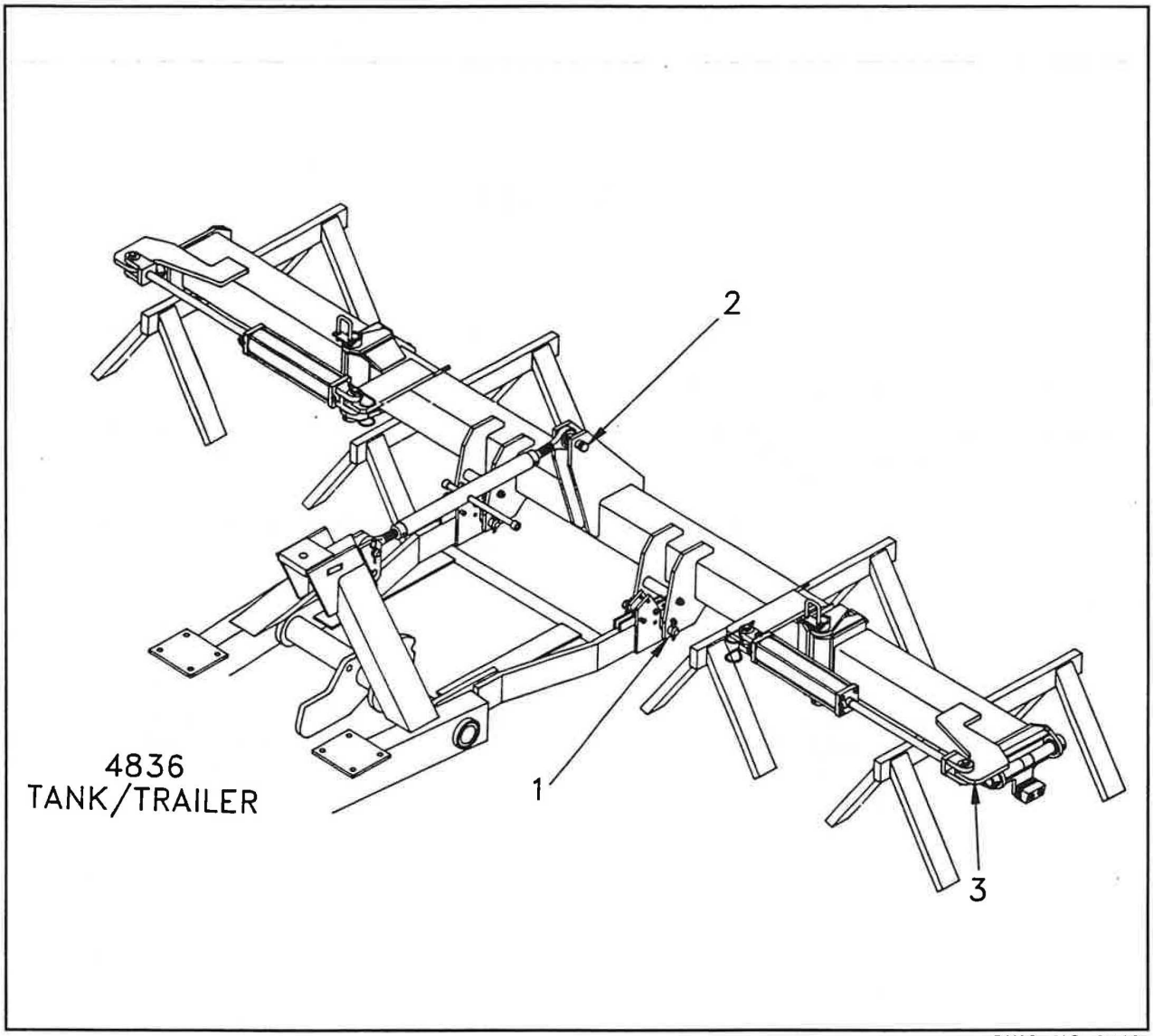
All references to left and right, front and rear apply to the machine as viewed from the rear looking in the direction of travel.

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

Nominal Size	SAE 2 Not Recommended For New Design lbf - ft		SAE 5 120 000 psi Min Tensile Str lbf - ft		SAE 8 150 000 psi Min Tensile Str lbf - ft	
	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated
1/4-20 1/4-28	6 6	4 5	8 10	6 7	12 14	9 10
5/16-18 5/16-24	11 12	8 9	17 19	13 14	25 25	18 20
3/8-16 3/8-24	20 23	15 17	30 35	23 25	45 50	35 35
7/16-14 7/16-20	30 35	24 25	50 55	35 40	70 80	55 60
1/2-13 1/2-20	50 55	35 40	75 90	55 65	110 120	80 90
9/16-12 9/16-18	70 80	55 60	110 120	80 90	150 170	110 130
5/8-11 5/8-18	100 110	75 85	150 170	110 130	220 240	170 180
3/4-10 3/4-16	175 195	130 145	260 300	200 220	380 420	280 320
7/8-9 7/8-14	165 185	125 140	430 470	320 350	600 660	460 500
1-8 1-12	250 270	190 200	640 700	480 500	900 1000	680 740
1 1/8-7 1 1/8-12	350 400	270 300	800 880	600 660	1280 1440	960 1080
1 1/4-7 1 1/4-12	500 550	380 420	1120 1240	840 920	1820 2000	1360 1500
1 3/8-6 1 3/8-12	660 740	490 560	1460 1680	1100 1260	2380 2720	1780 2040
1 1/2-6 1 1/2-12	870 980	650 730	1940 2200	1460 1640	3160 3560	2360 2660

* * MACHINE DESIGN FASTENER AND JOINT REFERENCE ISSUE.

REV. 01/2000 - #195



DWG. NO. 3748

STEP 1

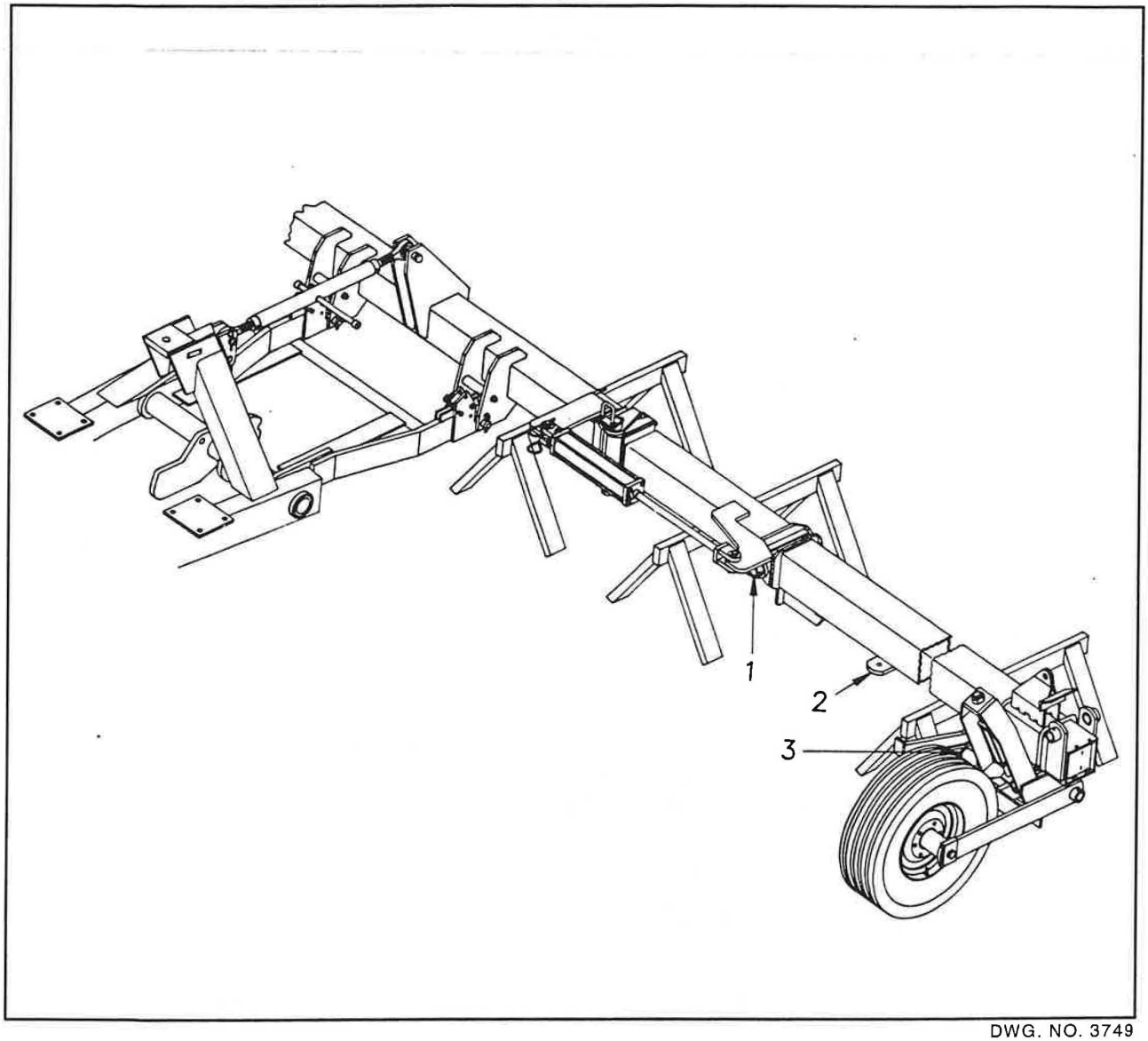
Place center toolbar on stands, holding it 19 inches off floor. Attach 3-point hitch members from 4836 tank/trailer assembly to center tooltbar hitch plate using hitch pin provided. (arrow 1 and 2).

STEP 2

Place both inner wings inline with center toolbar as shown in drawing.

STEP 3

Extend wing fold cylinder and attach to inner wing toolbar (arrow 3) using pin provided.



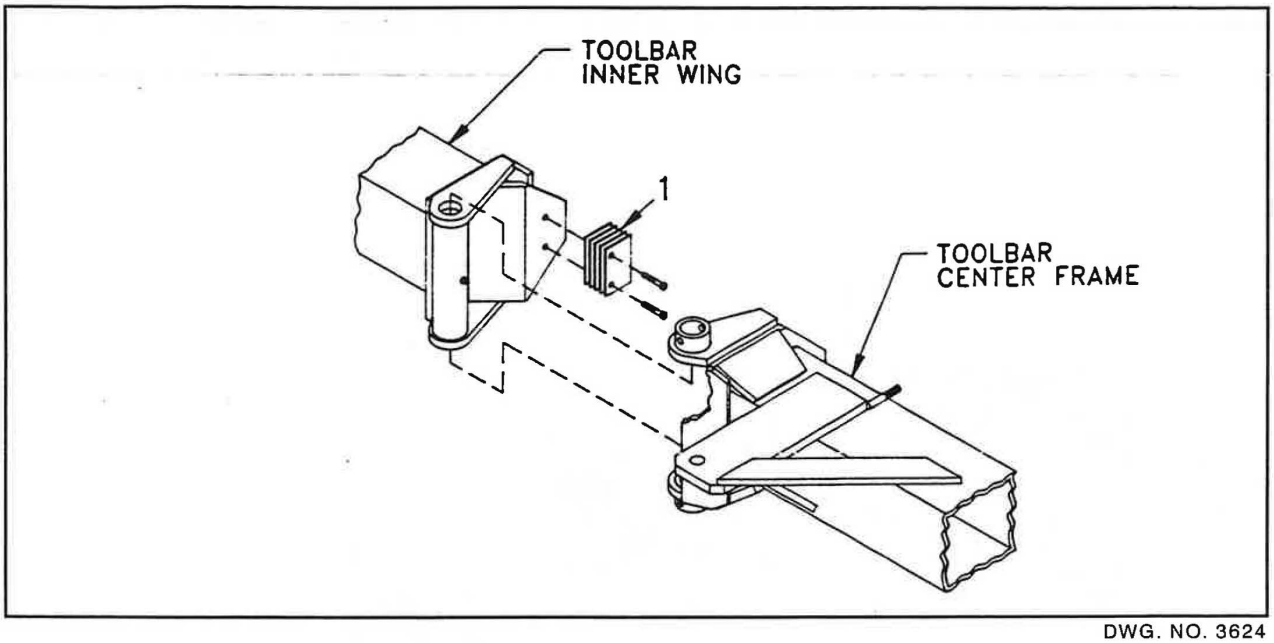
DWG. NO. 3749

STEP 4

Install both outer wings using pivot pin (arrow 1). **NOTE:** Drag link anchor (arrow 2) must be installed to front as shown in drawing.

STEP 5

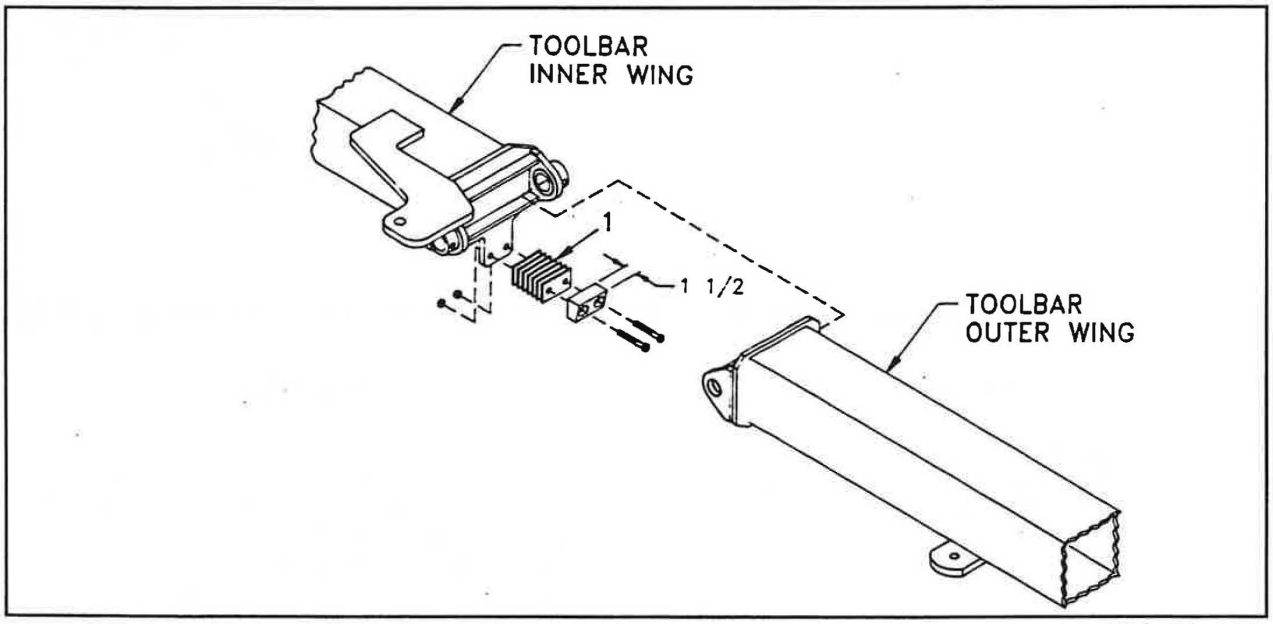
Install left and right wing wheel lift. **NOTE:** The roller lock (arrow 3) must be installed on inside. Install 3/4" u-bolt (arrow 4). Use the Assembly Diagrams for proper placement of Wheel Lift & Toolbar Guide for your model size and row spacing. (Refer to pages 21-23.)



DWG. NO. 3624

STEP 6

Check for proper toolbar alignment between center frame and both inner wings. Adjust number of shims (arrow 1) as required.



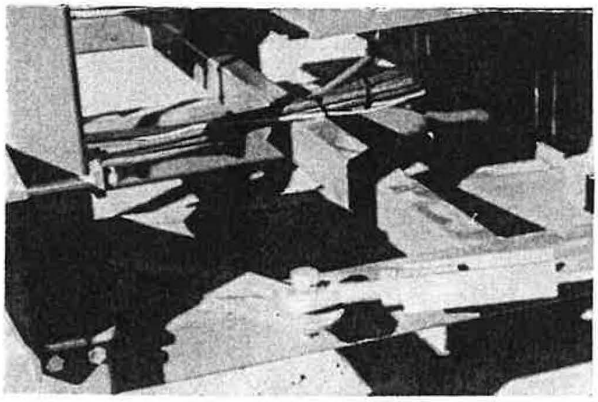
DWG. NO. 3623

Step 7

Adjust for the number of shims (arrow 1) between inner wings and outer wing.

Note: Use (4) shims for 15 inch rows and use (7) shims for 10 inch row spacing.

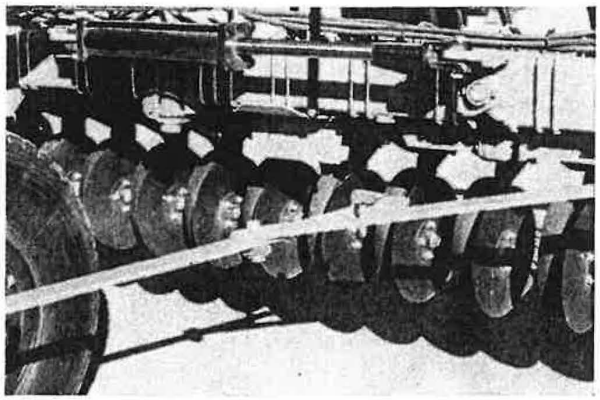
STEP 8



Left Hand Shown PHOTO NO. 4075

Install front drag link using 1 inch hex bolt provided mounting on top of trailer. Pull strap as shown. Correct drag link eyebolt dimension is 73 3/4" from center of 1" bolt through eye to center of 3/4 bolt at the pivot connection.

STEP 9



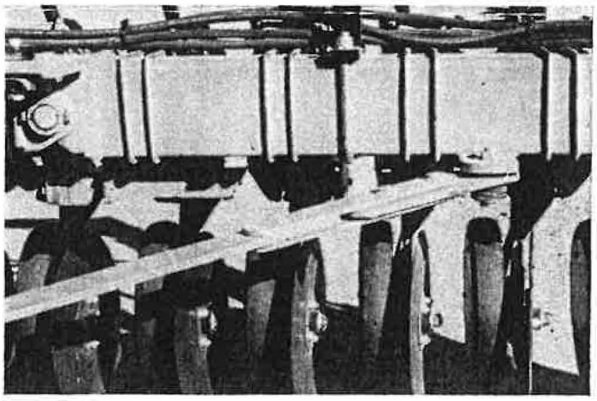
Left Hand Shown PHOTO NO. 4057

When installing drag link assembly the middle pivot and lock must be installed as shown, with Belleville washer on bottom and lock on top.

STEP 9A

IMPORTANT: Model 4832 with row units on 10 inch spacing requires that two guide plates be assembled to the inner toolbar weld. The guide plate assembly is shown in Photo No. 4057. Refer to the row unit diagram 3807 on page 22 for its location in relation to the toolbar hinge and the row units on 10" spacing.

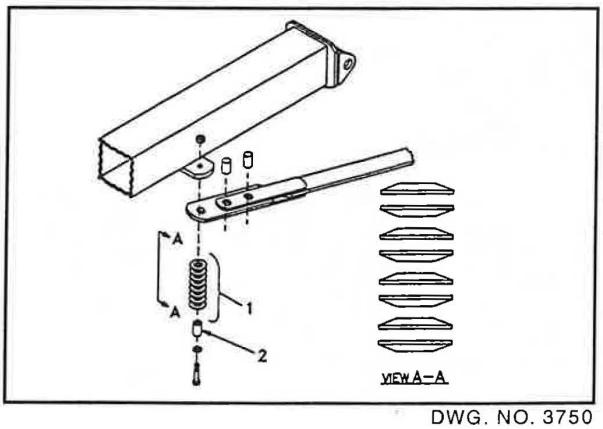
STEP 10



Right Hand Shown PHOTO NO. 4058

Install rear drag link to toolbar outer wing anchor strap as shown. **NOTE:** Position of drag link under anchor strap and Belleville washer under drag link.

STEP 11



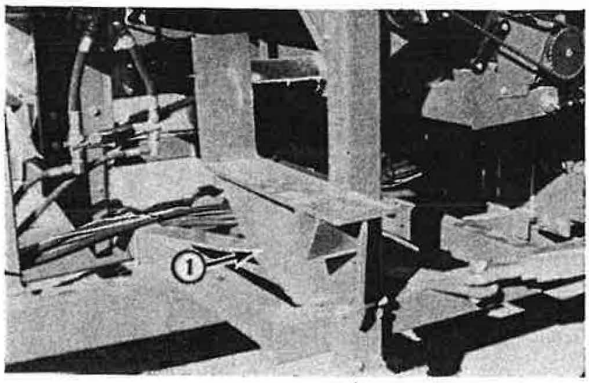
DWG. NO. 3750

When installing Belleville washer (arrow 1), **NOTE:** Position of washers to have the beveled sides together as shown in enlarged view. Also, tighten bolt down on spacer (arrow 2). At that point, the Belleville washer will be at proper tension.

continued 9A

Remove the two 1/2" u-bolts, nuts and lockwashers. Locate the guide plate weld on the toolbar according to the 8 1/2" dimension from the hinge point, on diagram 3807 on page 27. Make sure the formed edge is forward. Secure the guide plate weld to the toolbar using the 1/2 u-bolts, nuts and lockwashers.

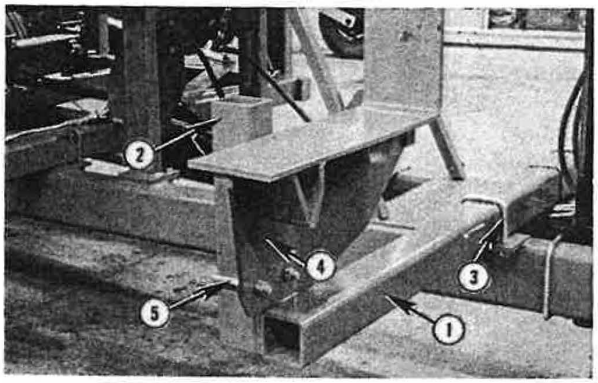
STEP 12A
(30 Ft. Toolbar)



Left Hand Shown PHOTO NO. 4051

Reinstall right and left hand wing rest (arrow 1) mounted to the front tank posts using existing 5/8 u-bolts, lockwashers and hex nuts.

STEP 12B
(40 Ft. Toolbar)



Right Hand Shown PHOTO NO. 3943A

Install front cross tube weld (arrow 1), center it on trailer tongue. **NOTE:** Position of vertical 3 x 4 tube (arrow 2) mounts to the rear. Install (2) 5/8 bolts (arrow 3) using lockwasher and hex nuts. Reinstall right and left hand wing rest (arrow 4) to the front cross tube, using original (2) 5/8 u-bolt (arrow 5) with lockwashers and hex nuts.

STEP 13

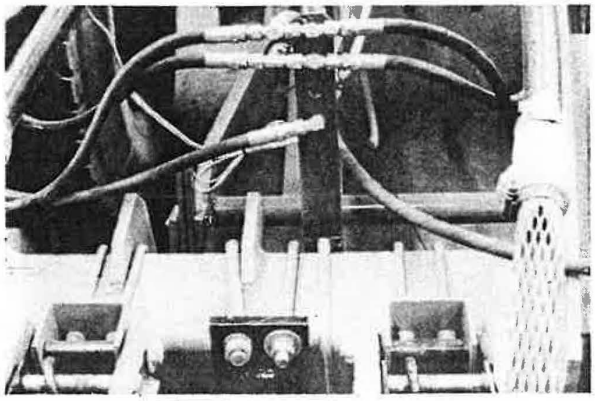
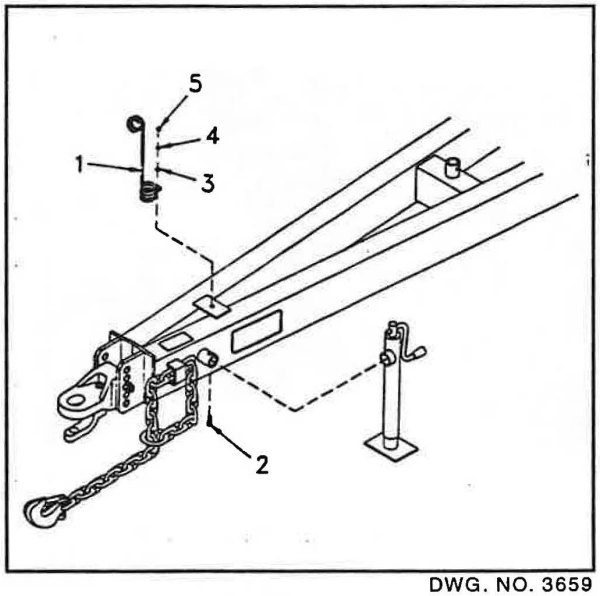


PHOTO NO. 4145

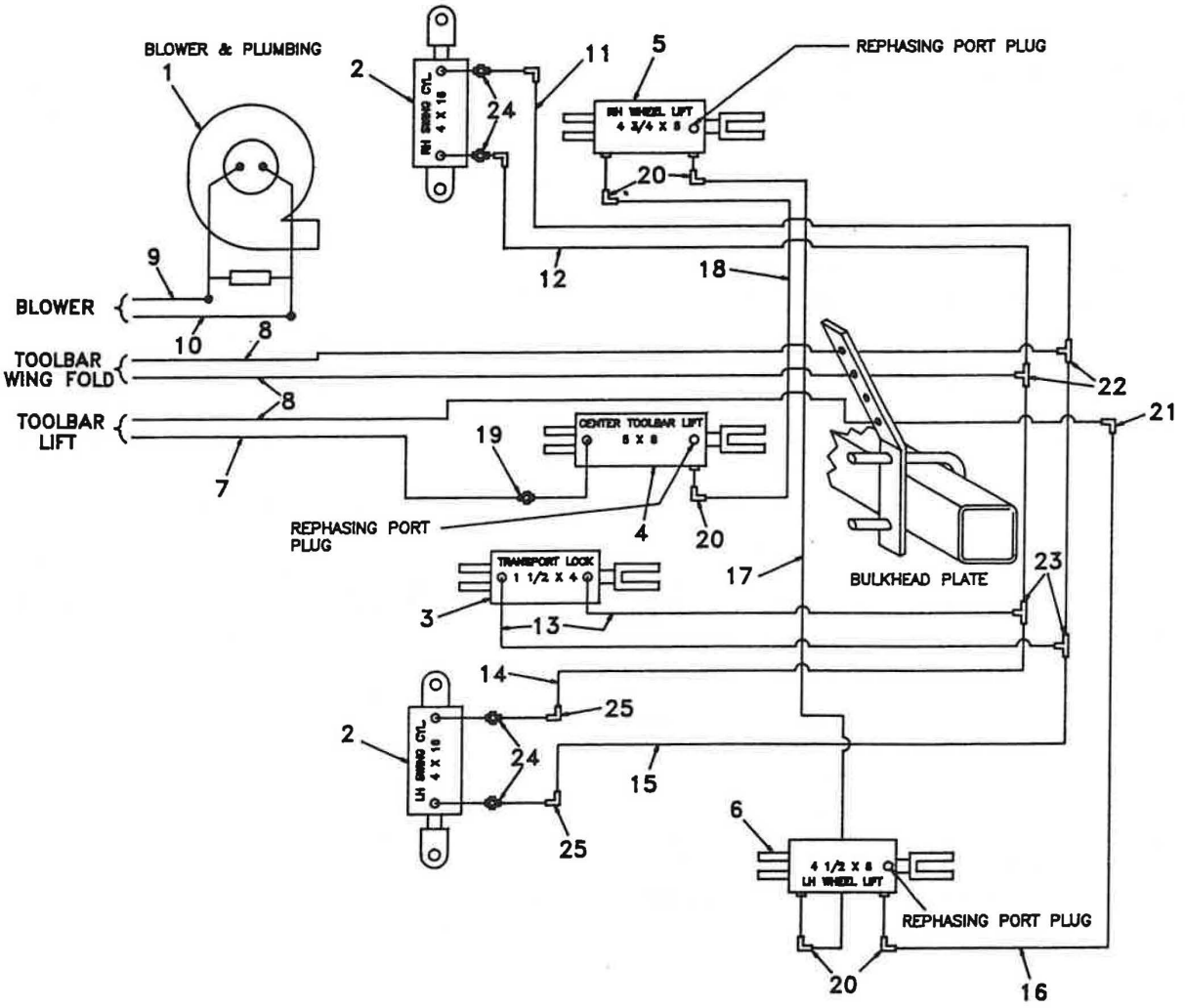
Install bulkhead plate (arrow 1) mount on front using 5/8 u-bolt (arrow 2) with lockwasher and hex nuts. **NOTE:** Bulkhead plate mounts left of center and between two 4800 disc opener units.



DWG. NO. 3659

Reinstall front hose stand (arrow 1), from cat walk step. Using (1) 1/2 x 1 1/2 hex bolt (arrow 2) with 1/2 flatwasher (arrow 3), 1/2 lockwasher (arrow 4) and 1/2 hex nut (arrow 5).

HYDRAULIC PLUMBING DIAGRAM



DWG. NO. 3751A

REF. NO.	PART NUMBER	DESCRIPTION	QTY
1	80305265	Blower & Plumbing Assembly	1
2	81004342	4 x 16 Cylinder Assembly	2
3	624001	HYD Cylinder 1 1/2 x 4	1
4	80305383	5 x 8 Cylinder	1
5	80305385	4 3/4 x 8 Cylinder	1
6	80305384	4 1/2 x 8 Cylinder	1
7	957-004-015	Hose Assy 3/8 x 288"	1
8	957-004-014	Hose Assy 3/8 x 342"	3
9	957-009-011	Hose Assy 1/2 x 200"	1
10	957-009-010	Hose Assy 1/2 x 210"	1
11	957-001-018	Hose Assy 3/8 x 79"	1
12	957-001-013	Hose Assy 3/8 x 59"	1
13	957-002-020	Hose Assy 3/8 x 66"	2
14	957-001-071	Hose Assy 3/8 x 36"	1
15	957-001-061	Hose Assy 3/8 x 56"	1

REF. NO.	PART NUMBER	DESCRIPTION	QTY
16	957-001-034	Hose Assy 3/8 x 180" 30' Toolbar	1
	957-001-074	Hose Assy 3/8 x 240" 40' Toolbar	1
17	957-001-072	Hose Assy 3/8 x 378" 30' Toolbar	1
	957-001-076	Hose Assy 3/8 x 498" 40' Tooolbar	1
18	957-001-073	Hose Assy 3/8 x 288" 30' Toolbar	1
	957-001-075	Hose Assy 3/8 x 348" 40' Toolbar	1
19	956-003-001	STR-ADPT 9/16 MJIC x 3/4 MORB w/o Restrictor	1
20	956-005-001-	Fitting-Elbow 90° 9/16 MJIC x 3/4 MORB	5
21	956-006-002	Fitting-Bulkhead Elbow 90° 9/16 MJIC x 9/16 MJIC	1
22	956-007-003	Fitting-Bulkhead Tee 9/16 MJIC x 9/16 MJIC x 9/16 MJIC	2
23	956-007-010	Fitting Tee 9/16 FJIC x 9/16 MJIC x 9/16 MJIC	2
24	956-008-024	Restrictor Fitting 3/4 MORB x 9/16 MJIC	4
25	956-005-002	Fitting-Elbow 90° 9/16 MJIC x 9/16 FJIC	4

STEP 14

HYDRAULIC SYSTEM INSTALLATION

WARNING: TO PREVENT PERSONAL INJURY OR DEATH. ESCAPING HYDRAULIC/DIESEL FLUID UNDER PRESSURE CAN PENETRATE THE SKIN CAUSING SERIOUS INJURY.

- **DO NOT use your hand to check for leaks. Use a piece of cardboard.**
- **Stop tractor and relieve pressure before connecting/disconnecting lines.**
- **Tighten all connections before pressurizing hydraulic lines.**
- **If fluid is injected into the skin, get medical attention immediately to prevent serious infections.**

IMPORTANT: Cleanliness is very important when working in the hydraulic system. Prevent contamination by assembling the cylinders, hoses, couplers and valves in a clean area of the shop.

Leave protective caps on the fluid openings until ready to make the connection. When charging the system, use a tractor or other source that contains clean oil, free of abrasive materials. Keep couplers clean. abrasive particles, like sand or metal fragments, can damage seals, barrels and pistons, causing internal leakage.

Refer to illustration on page 13 for proper assembly and installation of hydraulic lines and fittings.

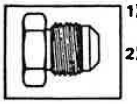
Refer to pages 14-16 for proper assembly and installation of optional hydraulic row markers and fill augers.

NOTE: Thread sealant is to be used on the pipe threads going into the male hydraulic tips that connect to the tractor. The thread sealant must be compatible with the hydraulic systems.

Secure all hydraulic connections in accordance with hydraulic fitting installation procedures and the torque table.

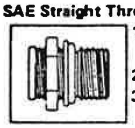
HYDRAULIC FITTING INSTALLATION PROCEDURES AND TORQUE TABLE

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

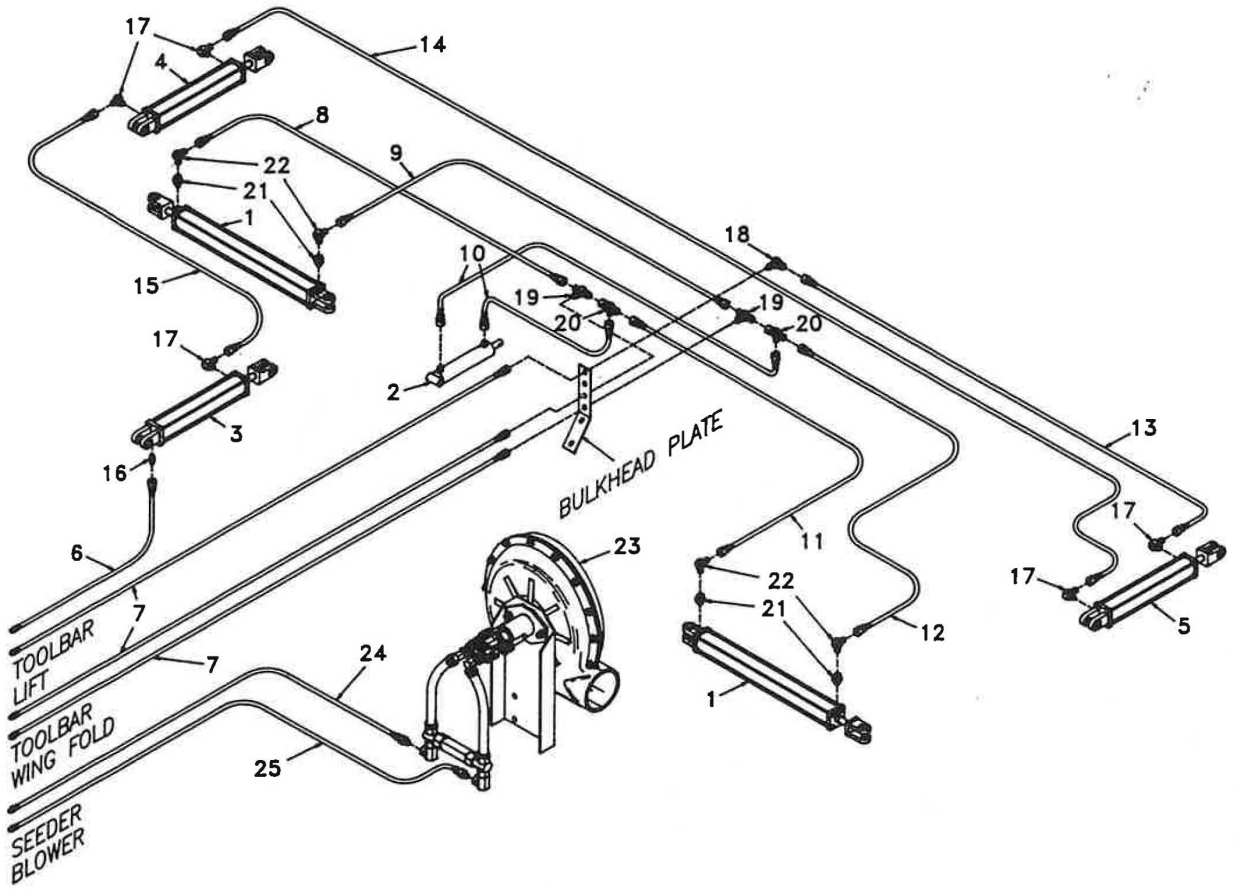


1) Insure jam nut and washer are backed up to the back side of smooth portion of elbow adapter.
2) Lubricate "O" Ring–VERY IMPORTANT!
3) Thread into port until washer bottoms onto spot face.
4) Position elbows by backing up adapter.
5) Tighten jam nut.

DWG. NO. 1966

Hiniker does not supply quick connect hydraulic couplings with the 4836 Air Seeder. Use couplers that match the customer's tractor outlets. ISO quick connect couplers are the most common style.

HYDRAULIC HOSE ASSEMBLY

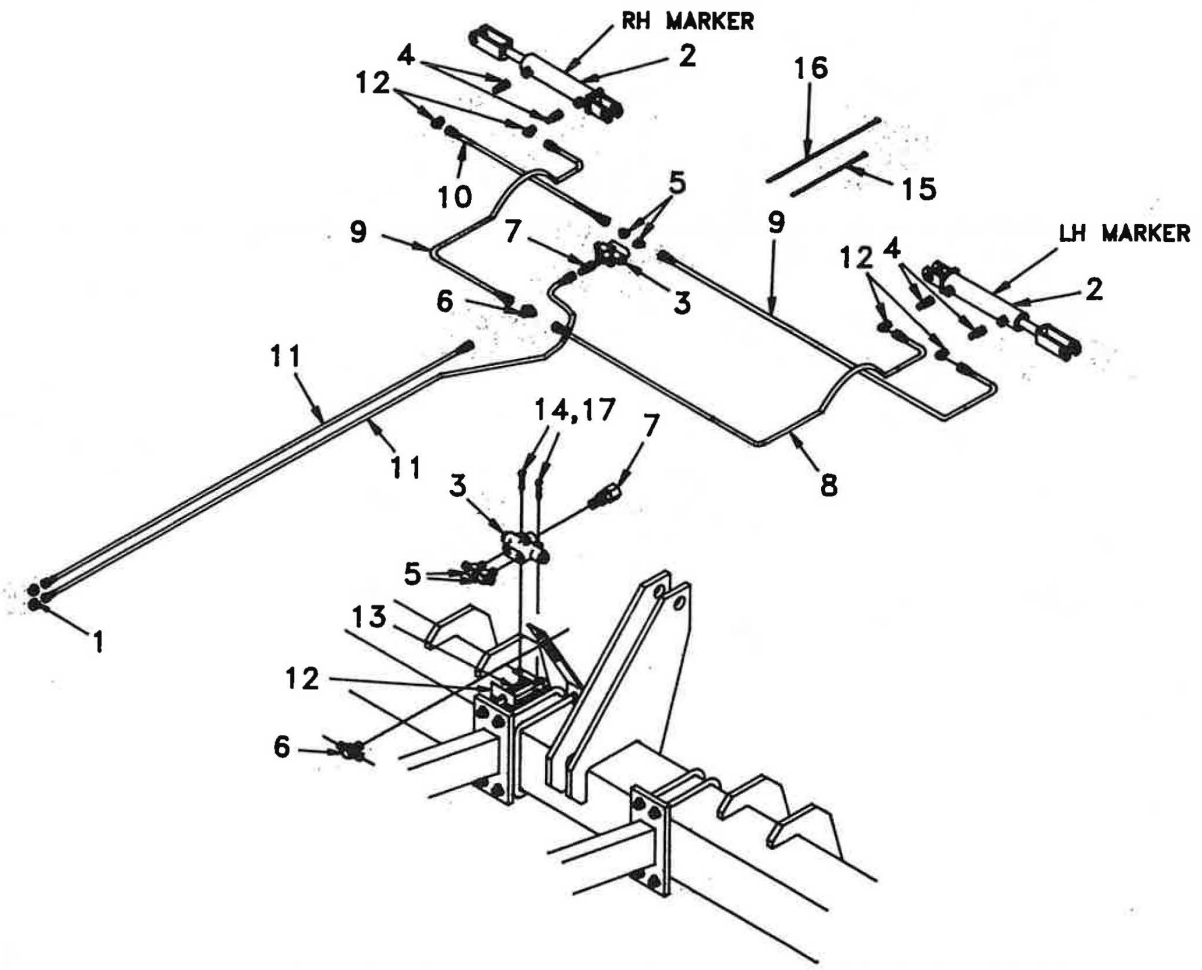


DWG. NO. 3653B

REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	81004342	4 x 16 Cylinder Assy	2
2	624001	1 1/2 x 4 HYD Cylinder	1
3	80305383	5 x 8 Cylinder	1
4	80305385	4 3/4 x 8 Cylinder	1
5	80305384	4 1/2 x 8 Cylinder	1
6	957-004-015	Hose Assy 3/8 x 288"	1
7	957-004-014	Hose Assy 3/8 x 342"	3
8	957-001-018	Hose Assy 3/8 x 79"	1
9	957-001-013	Hose Assy 3/8 x 59"	1
10	957-002-020	Hose Assy 3/8 x 66"	2
11	957-001-071	Hose Assy 3/8 x 36"	1
12	957-001-061	Hose Assy 3/8 x 56"	1
13	957-001-034	Hose Assy 3/8 x 180" 30' Toolbar	1
	957-001-074	Hose Assy 3/8 x 240" 40' Toolbar	1
14	957-001-072	Hose Assy 3/8 x 378" 30' Toolbar	1
	957-001-076	Hose Assy 3/8 x 498" 40' Toolbar	

REF. NO.	PART NUMBER	DESCRIPTION	QTY.
15	957-001-073	Hose Assy 3/8 x 288" 30' Toolbar	1
	957-001-075	Hose Assy 3/8 x 348" 40' Toolbar	1
16	956-003-001	STR-ADPT 9/16 MJIC x 3/4 MORB w/o Restictor	1
17	956-005-001	Fitting Elbow 90° 9/16 MJIC x 3/4 MORB	5
18	956-006-002	Fitting-Bulkhead Elbow 90° 9/16 MJIC x 9/16 MJIC	1
19	956-007-003	Fitting-Bulkhead Tee 9/16 MJIC x 9/16 MJIC x 9/16 MJIC	2
20	956-007-010	Fitting Tee 9/16 FJIC x 9/16 MJIC x 9/16 MJIC	2
21	956-008-024	Restrictor Fitting 3/4 MORB x 9/16 MJIC	4
22	956-005-002	Fitting-Elbow 90° 9/16 MJIC x 9/16 FJIC	4
23	80504728	Blower & Mount Assy	1
24	957-009-011	Hose Assy 1/2 x 198"	1
25	957-009-010	Hose Assy 1/2 x 208"	1

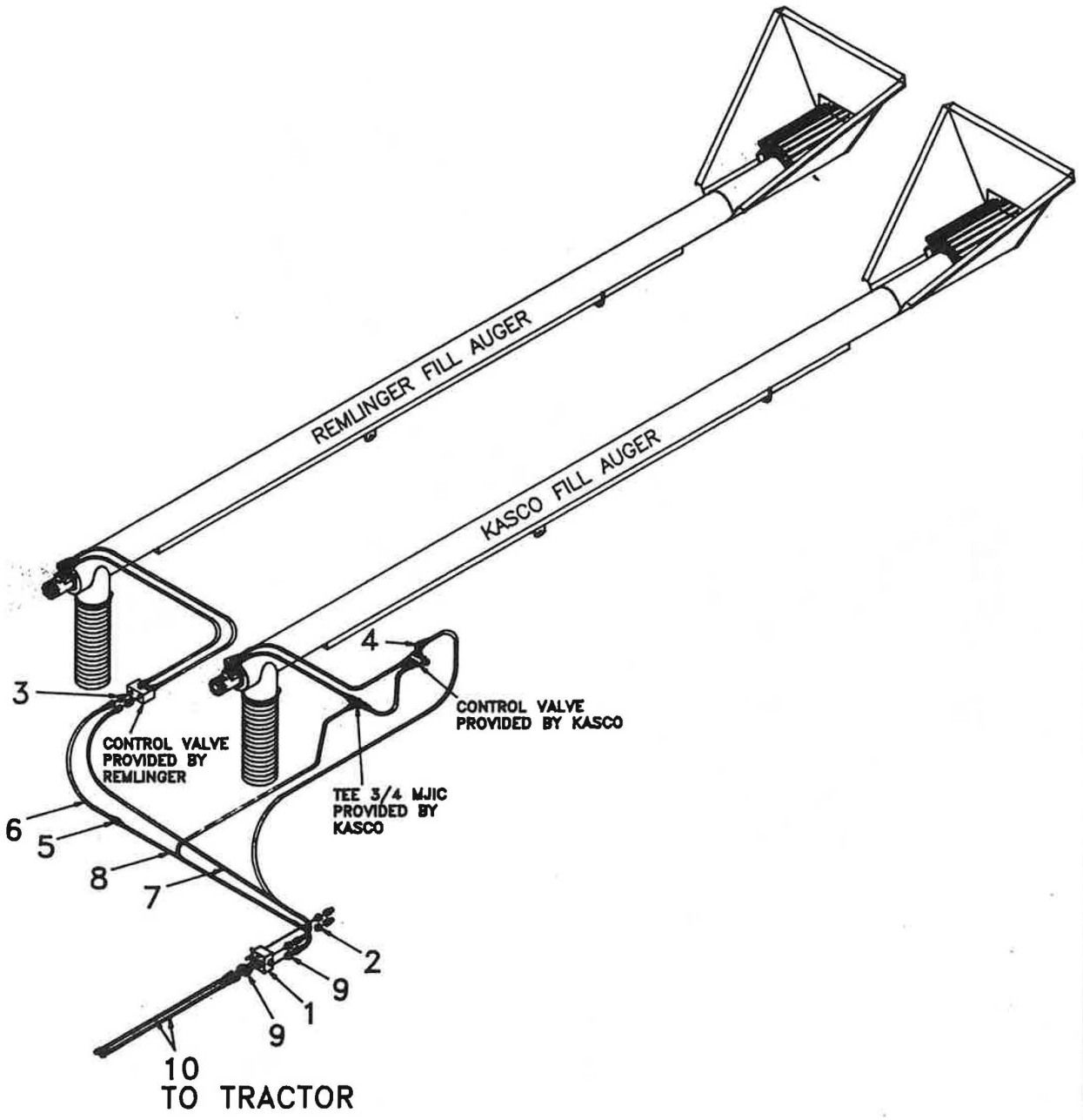
OPTIONAL HYDRAULICS
MARKERS



HINIKER P/N 80305585, 80305586 DWG. NO. 3777A

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	957-004-014		2	8	957-001-074	40' Hose Assy 3/8 x 240"	1
2	624129	2 1/2 x 24 CYL Assy PMC #AR-265	2		957-001-034	30' Hose Assy 3/8 x180"	1
3	805-003-026	Sequence Valve	1	9	957-001-079	40' Hose Assy 3/8 x 260"	2
4	956-008-024	Restrictor Fitting	4		957-001-077	30' Hose Assy 3/8 x 200"	2
5	956-005-001	Fitting-Elbow 90°	2	10	957-001-080	40' Hose Assy 3/8 x 284"	1
6	956-007-003	Fitting-Tee	1		957-001-078	30' Hose Assy 3/8 x 224"	1
7	956-003-001	Fitting STR. APT. 3/4 ORB x 9/16 MJIC	1	11	957-004-014	Hose Assy 3/8 x 318"	2
				12	956-005-002	Fitting 90° Elbow	4

OPTIONAL HYDRAULICS
FILL AUGERS

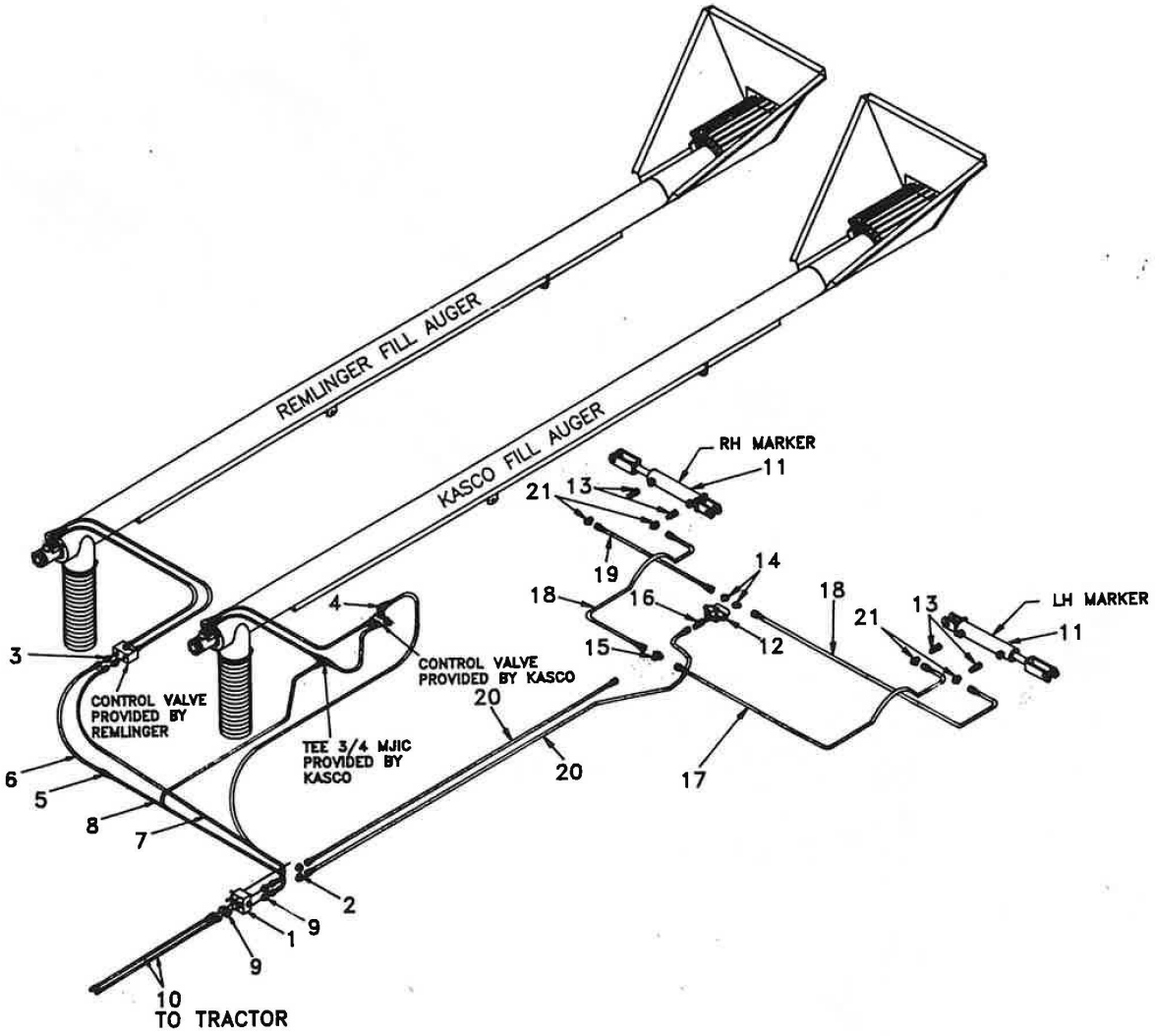


HINIKER P/N 80305509

DWG. NO. 3778A

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	80305516	HYD Valve	1	6	957-005-021	Hose Assy 3/8 x 50"	1
2	203-35510	O-Ring Pipe Plug	2	7	957-001-074	Hose Assy 3/8 x 240"	1
3	956-003-003	Fitting-Straight Adapter 1/2 MNPT x 9/16 MJIC	2	8	957-005-003	Hose Assy 3/8 x 191"	1
				9	956-003-001	STR-ADPT 9/16 MJIC x 3/4 MORB	4
4	956-005-003	Fitting-Elbow 90° 1/2 MNPT x 9/16 MJIC	1	10	957-004-016	3/8 Hose Assy 3/8 x 126"	2
5	206-01019	Union 3/4 MJIC (2)	1				

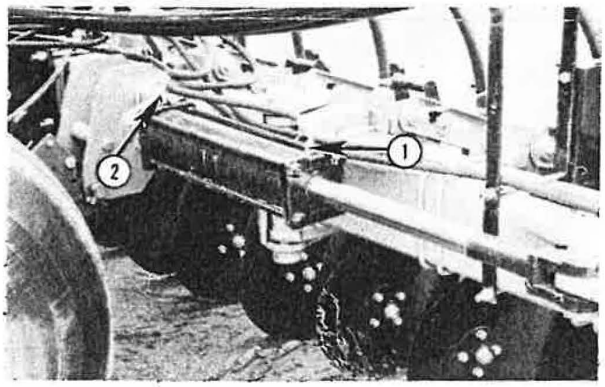
OPTIONAL HYDRAULICS
MARKERS & FILL AUGERS



HINIKER P/N 80305509, 80305585 & 80305586 DWG. NO. 3779A

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	80305516	HYD Valve	1	13	956-008-024	Restrictor Fitting	4
2	203-35510	O-Ring Pipe Plug	2	14	956-005-001	Fitting-Elbow 90°	2
3	956-003-003	Fitting-Straight Adapter 1/2 MNPT x 9/16 MJIC	2	15	956-007-003	Fitting-Tee	1
				16	956-003-001	Fitting STR. APT. 3/4 ORB x 9/16 MJIC	1
4	956-005-003	Fitting-Elbow 90° 1/2 MNPT x 9/16 MJIC	1	17	957-001-074	40' Hose Assy 3/8 x 240"	1
5	206-01019	Union 3/4 MJIC (2)	1		957-001-034	30' Hose Assy 3/8 x 180"	1
6	957-005-021	Hose Assy 3/8 x 50"	1	18	957-001-079	40' Hose Assy 3/8 x 260"	2
7	957-001-074	Hose Assy 3/8 x 240"	1		957-001-077	30' Hose Assy 3/8 x 200"	2
8	957-005-003	Hose Assy 3/8 x 191"	1	19	957-001-080	40' Hose Assy 3/8 x 284"	1
9	956-003-001	STR-ADPT 9/16 MJIC x 3/4 MORB	4		957-001-078	30' Hose Assy 3/8 x 224"	1
10	957-004-016	Hose Assy 3/8 x 126"	2	20	957-004-014	40' Hose Assy 3/8 x 342"	2
11	624129	2 1/2 x 24 CYL Assy PMC #AR-265	2		957-004-014	30' Hose Assy 3/8 x 342" Cut Down To 192" w/9/16 FJIC END	2
12	805-003-026	Sequence Valve	1				
				21	956-005-002	Fitting 90° Elbow	4

STEP 14A



LH SHOWN PHOTO NO. 3935A

Install right and left hand toolbar fold cylinder as shown in photo. **NOTE:** Restrictor fittings (arrow 1 and 2).

STEP 14B

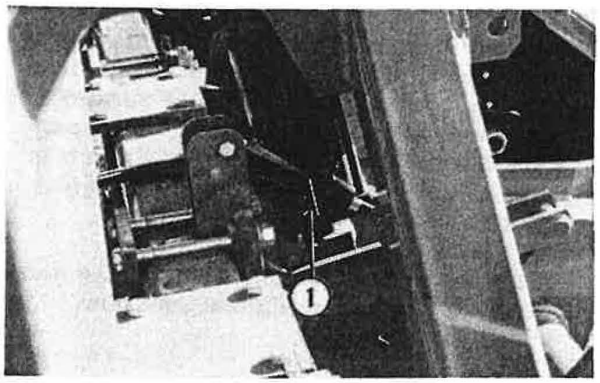


PHOTO NO. 4055

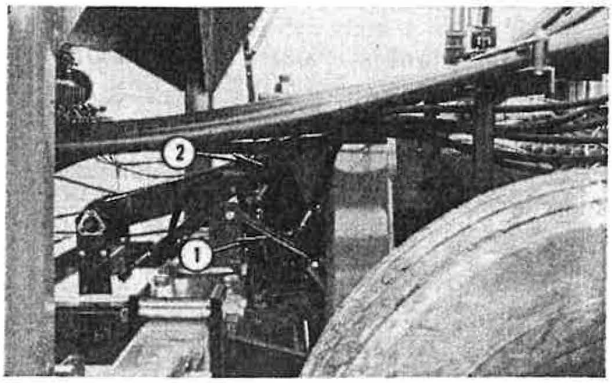
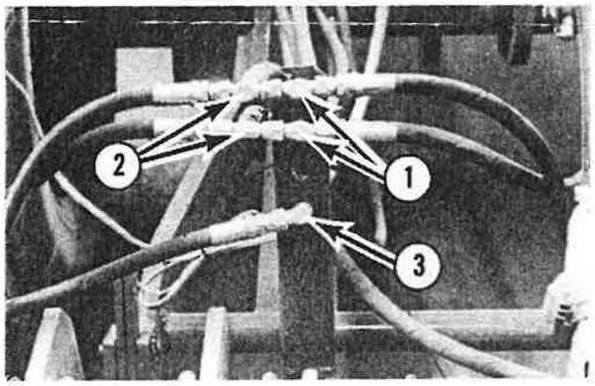


PHOTO NO. 3969

Install hydraulic hoses and fittings to transport lock cylinder (arrow 1) as shown in photo. Install hydraulic hose and fitting to center rockshaft lift cylinder (arrow 2).

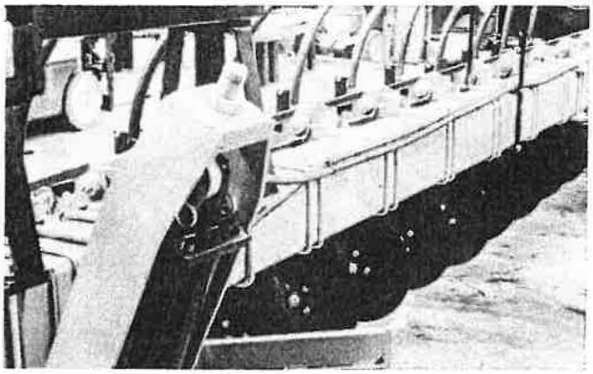
STEP 14C



TOOLBAR FOLD PLUMBING PHOTO NO. 4145A

Install (2) bulkhead tee fittings (arrow 1) into bulkhead plate. Add (2) inline tee (arrow 2) which runs to transport lock cylinder. **NOTE:** 90° bulkhead fitting is return line from left hand wheel lift cylinder (arrow 3).

STEP 14D



RH SHOWN PHOTO NO. 3958A

Install hydraulic hoses and fittings to right and left hand wheel lift cylinder. Route hoses through hose support (arrow 1) in photo 4059. **NOTE:** After 4800 seeder units have been installed, hydraulic hose must be tied up as shown in photo 3958A.

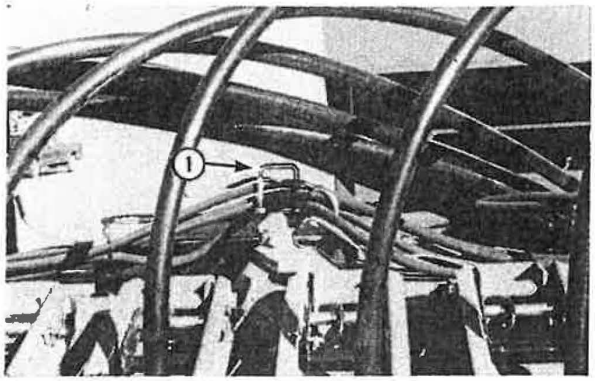


PHOTO NO. 4059

STEP 14E

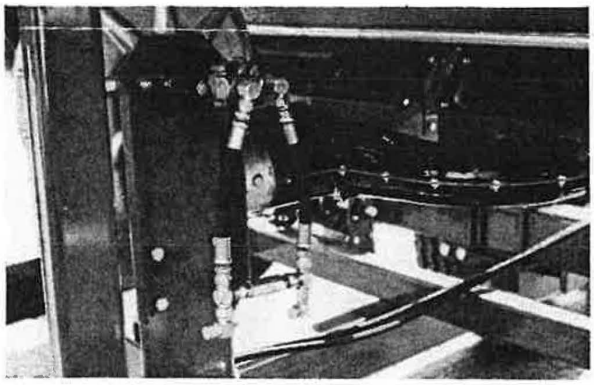
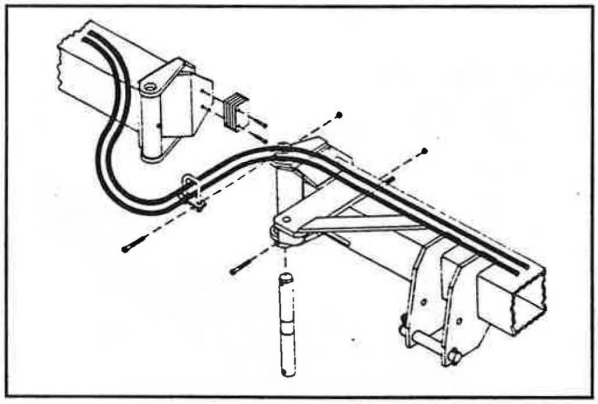


PHOTO NO. 1055A

Install hydraulic hoses to blower plumbing as shown in photo.

STEP 14F



DWG. NO. 3632

Install hydraulic hoses through pivot pin hose guide as shown in drawing.

NOTE: Optional marker hoses will also run through hose guide.

STEP 15

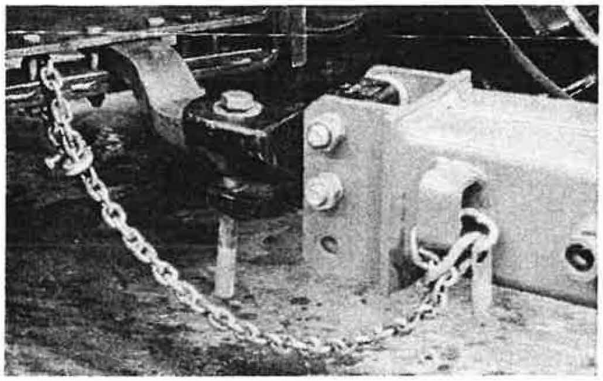


PHOTO NO. 3973

Attach 4836 tank/trailer to tractor hitch, and attach safety chain as shown in photo. Connect all hydraulic lines to tractor outlets.

STEP 16

IMPORTANT: Before operating hydraulic toolbar 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 system until system is purged of air. Reattach cylinder rod pin and cautiously cycle toolbar lift through full cycle. Failure to take precaution may result in bodily injury or equipment damage.

Raise toolbar and remove stands from under toolbar. Raise toolbar to highest position.

STEP 17

IMPORTANT: Never operate wing fold cylinders without (4) restrictor fittings part number 956-008-024 for 4 inch cylinder, one at each end of both cylinders. Failure to have restrictors in place may result in body injury or equipment damage.

Fold toolbar forward, only half way at this time. Return toolbar to straight inline and lower toolbar to have bottom of toolbar 19 inches off the ground.

STEP 18

CAUTION: A lifting device such as crane, loader, or forklift is required for handling large parts and shipping bundles. Do not attempt to remove disc opener units from shipping bundle while in vertical position. Bundle may fall, causing severe injury or death, if not handled with proper equipment. While removing bundling straps, wires, or brackets be certain to keep clear of any parts that may drop. Support heavy sections with hoist or blocks before removing wires or straps.

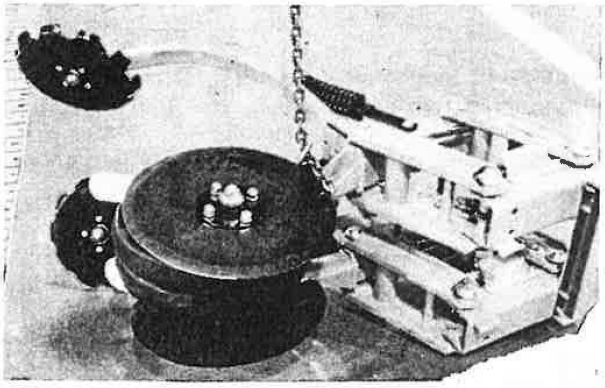


PHOTO NO. 3974A

When moving right and left hand disc opener shipping bundle, attach lift chain around rear mast shank, and between parallel link and gauge wheel, as shown in photo.

CAUTION: When removing any bundling straps, wires or brackets, be certain to keep clear of any parts which may drop. Support heavy sections with hoist or blocks before removing wires or straps.

STEP 19

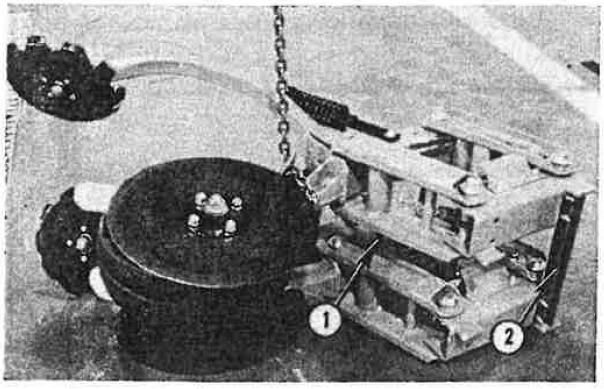


PHOTO NO. 3974

With disc opener shipping bundle laying securely on the floor as shown in photo, cut the shipping band (arrow 1) and unbolt angle strap (arrow 2). Lift top unit off and lay securely on the floor.

STEP 20

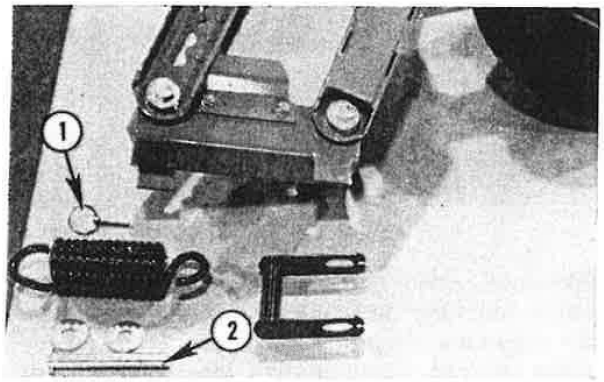
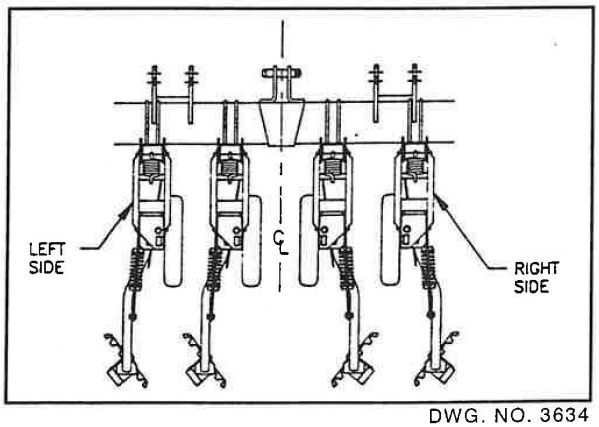


PHOTO NO. 3976

With disc opener laying on the floor, remove down pressure spring assembly. First remove klik pin (arrow 1) and 3/4" flat washer, then 3/4" pin (arrow 2). At this time the spring will be loose inside of disc opener. Set spring and handle aside at this time. It will all be reassembled later.

NOTE: All hardware should be tightened only enough to insure safety during assembly. Torque hardware to specified values, as shown on torque chart on page 5, only after assembly has been completed.

RIGHT AND LEFT SIDE DISC OPENER IDENTIFICATION



DWG. NO. 3634

Notice gauge wheel on inside, starting at toolbar center and the rotary closer support arm offset to outside.

STEP 21

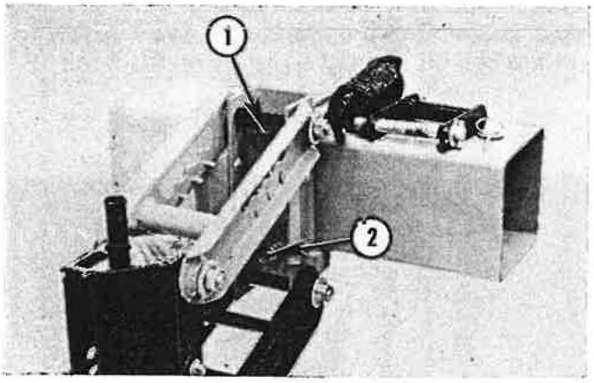


PHOTO NO. 3621A

Make sure bottom of toolbar is 19" off the ground before mounting disc opener up to the toolbar. See assembly diagrams on pages 21 to 23 for proper location of disc opener. Move disc opener up to toolbar with front mast locks engaged. Install (2) 1/2 u-bolts (arrow 1) with (4) 1/2 lockwashers and (4) 1/2 hex nuts (arrow 2).

STEP 22

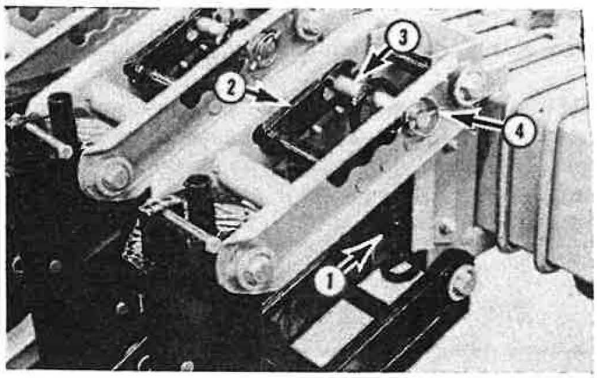


PHOTO NO. 3605A

After disc opener has been mounted up to toolbar and u-bolt and hex nuts are tight, reinstall down pressure spring (arrow 1).

NOTE: The large 1 inch hook opening is at bottom, use front 7/8 diameter rod anchor.

Reinstall adjusting handle (arrow 2) and 3/4" pin (arrow 3) with 3/4" flat washers and klik pin (arrow 4).

STEP 23

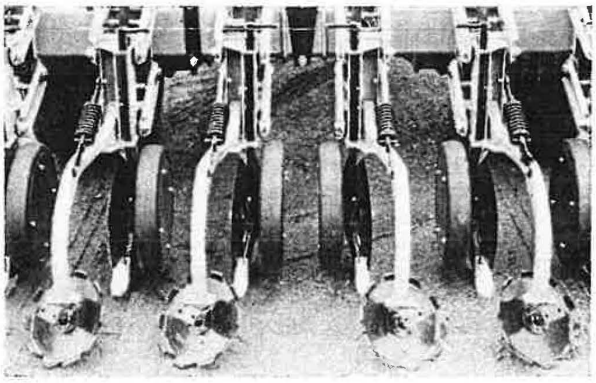


PHOTO NO. 3977

Continue to mount disc openers across the toolbar working from center out.

See Assembly Diagrams on pages 21 to 23 for proper location of disc openers.

STEP 24

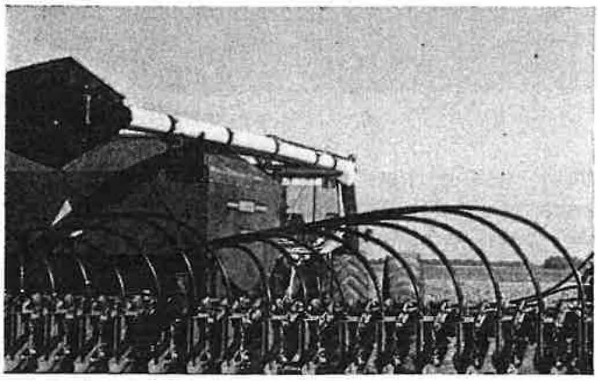
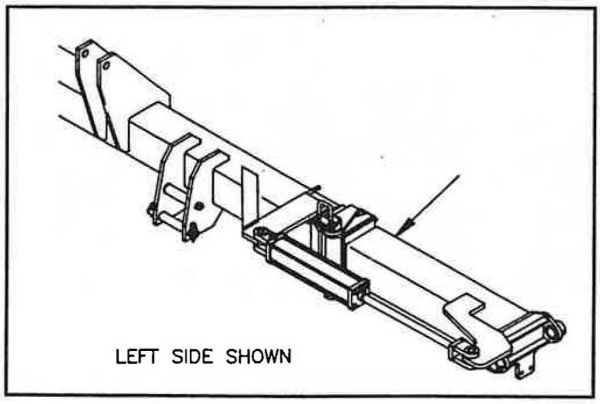


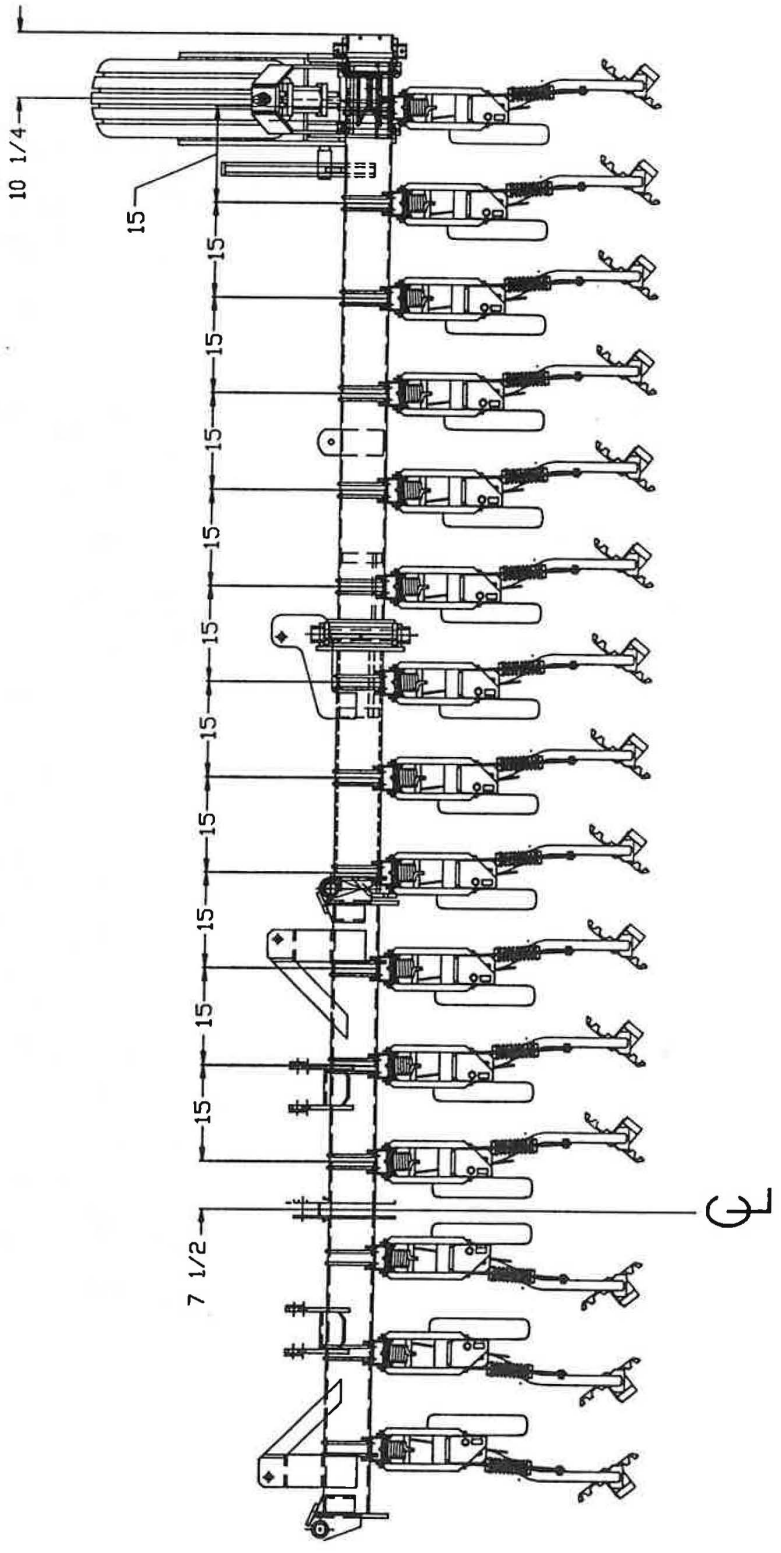
PHOTO NO. 3978

Continue to mount disc opener around hinges. **NOTE:** On Model 4831 30 ft. w/15" & 4833 40 ft. w/15" spacing only. You must remove the bottom lock pad on the front channel weld of the row unit next to the horizontal wing hinge is drawing below.

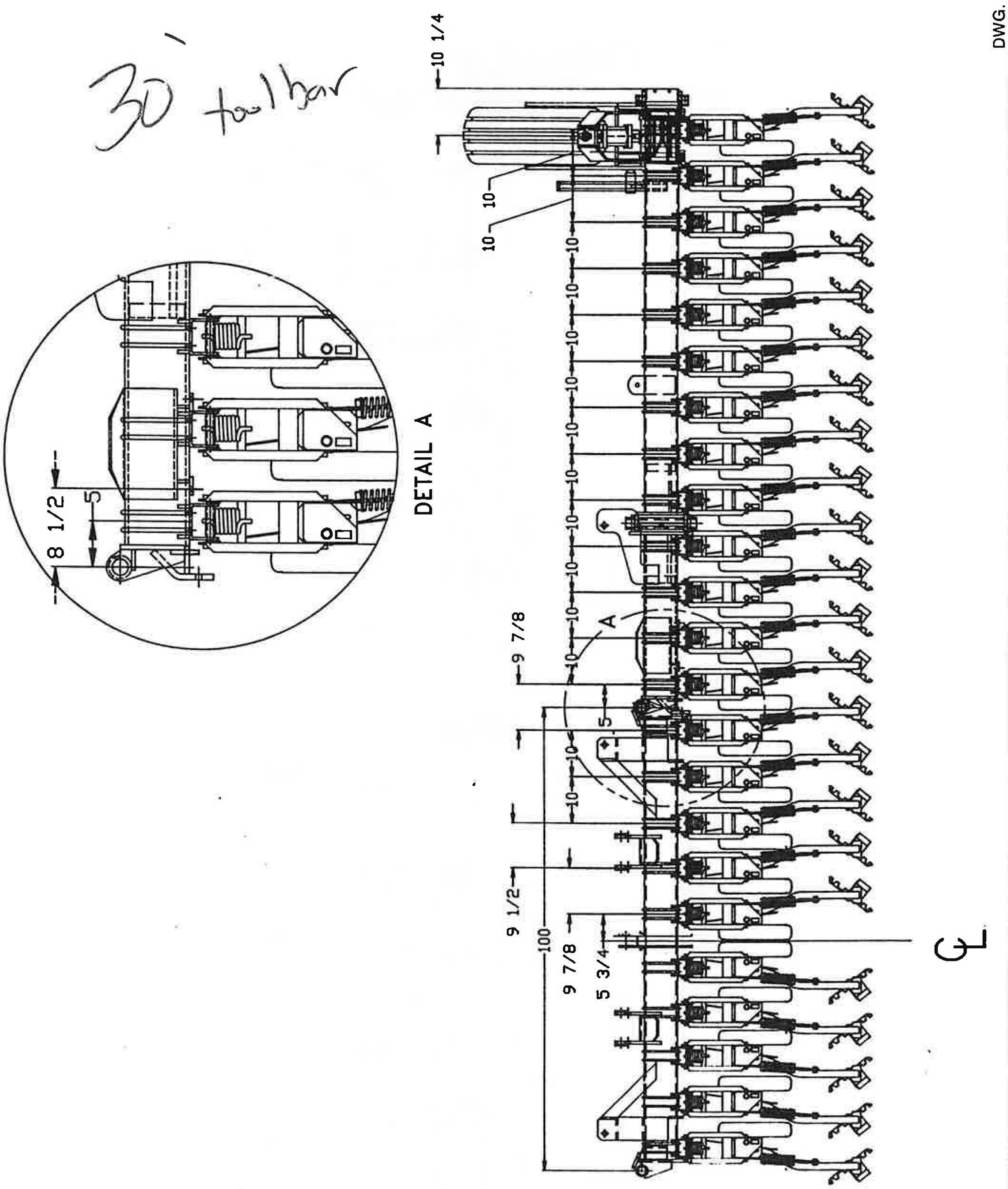


4831 24 ROW 15 INCH SPACING

DWG. NO. 3806

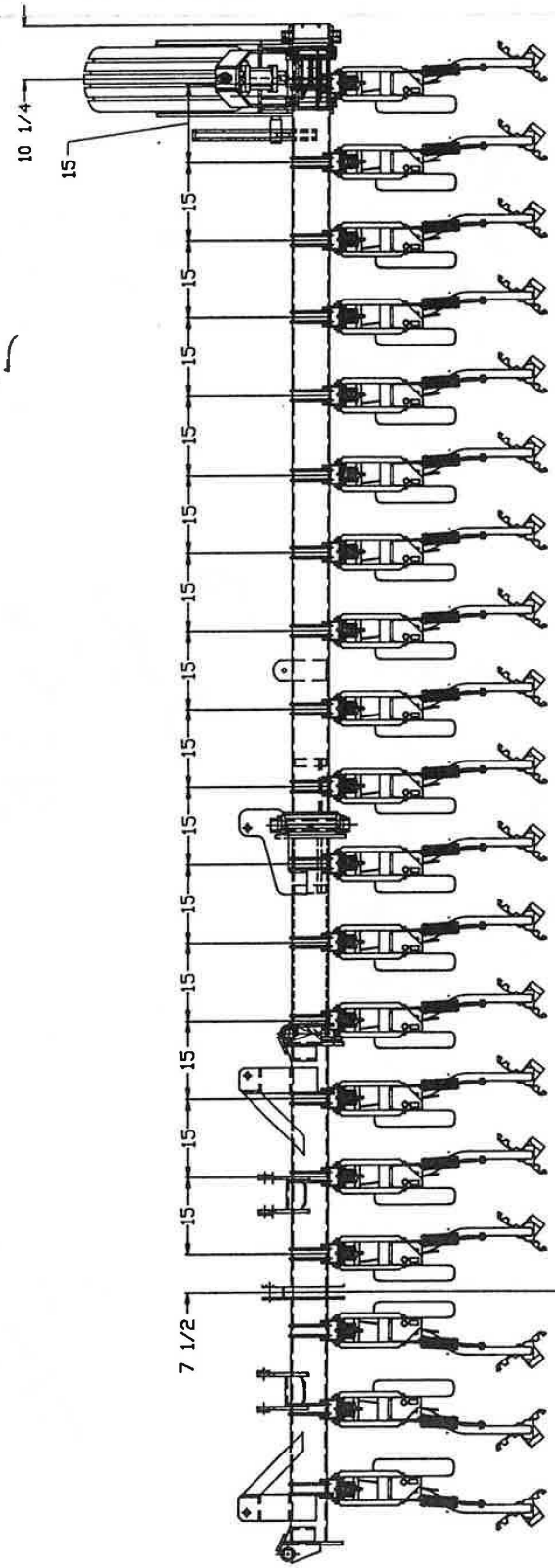


4832 36 ROW 10 INCH SPACING



4833 32 R0W 15 INCH SPACING

DWG. NO. 3808



40 to 1 bar

STEP 25

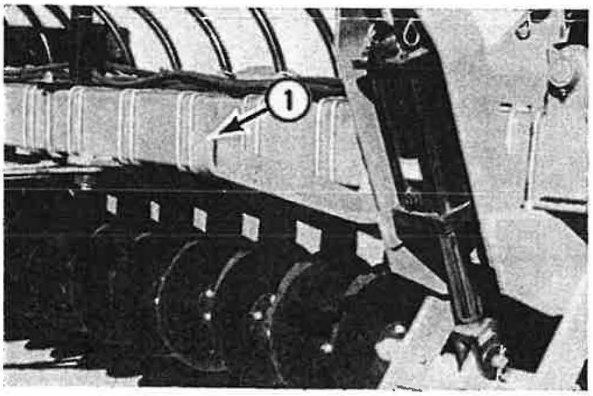


PHOTO NO. 4043

Raise toolbar up to full height, all five sections will be level at this time. Fold toolbar wings forward until toolbar guide (arrow 1) nose piece will enter wing rest plate.

STEP 26

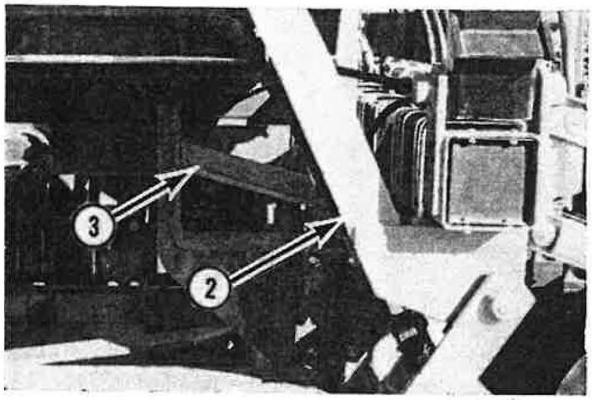


PHOTO NO. 4044

Fold toolbar wing all the way forward until toolbar guide (arrow 1) hits toolbar rest back stop (arrow 2). **NOTE:** Check that both sides are up to back stop before raising wheel lift arms and locking for transport.

IMPORTANT: When toolbar lowers onto toolbar rest, it will move rearward 2 to 3 inches. Failure to take precaution may result in bodily injury or equipment damage.

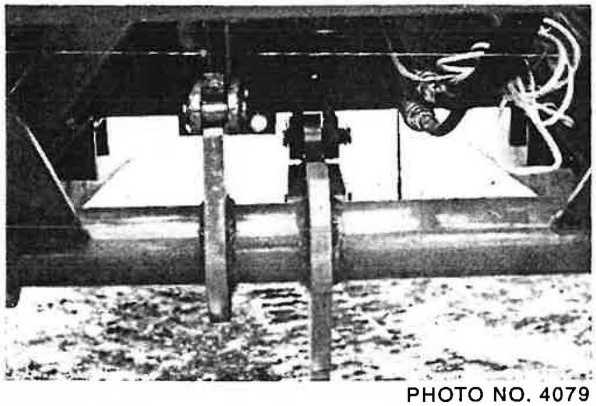


PHOTO NO. 4079

NOTE: Make sure the transport lock arm clear the large cam and settles in the recessed groove before transporting. If latch doesn't clear cam or clearance is in excess 1/2", add or remove spacers between transport lock weldment and frame as necessary.

STEP 27

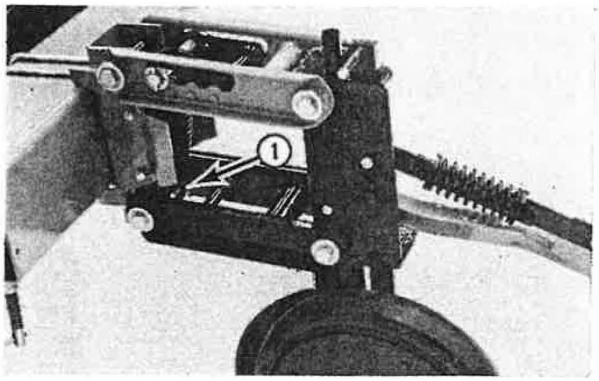


PHOTO NO. 3627

To insure uniform down pressure on all disc openers, check that the down pressure spring bottom hook is anchored on front 7/8 diameter tube. **NOTE:** This should be a start position for all units.

STEP 28

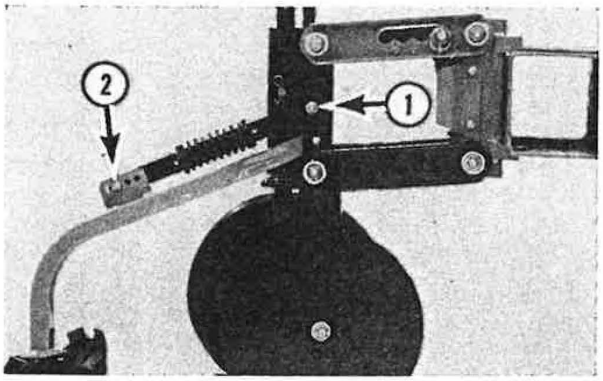


PHOTO NO. 3626

Check for uniform rotary closer down pressure strap anchor location front and rear. If required

move front into middle hole on rear mast (arrow 1, previous page). Move rear anchor into third hole (arrow 2) as shown in photo 3626.

NOTE: This should be a start position for all units.

STEP 29

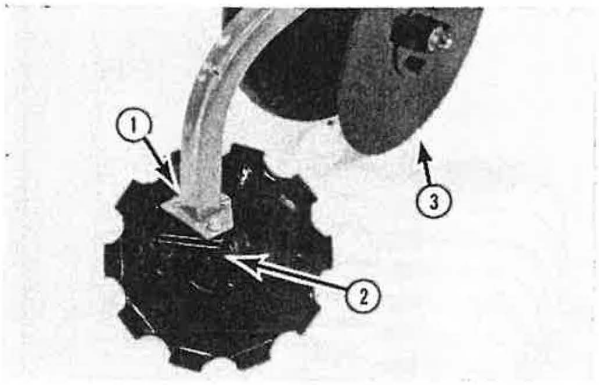


PHOTO NO. 3628

To insure uniform angle on all rotary closers, check that all units are flush at front edge (arrow 1) and the rotary closer bearing (arrow 2) is on the same side as the disc opener coulter (arrow 3).

NOTE: This should be a starting angle for all units.

STEP 30

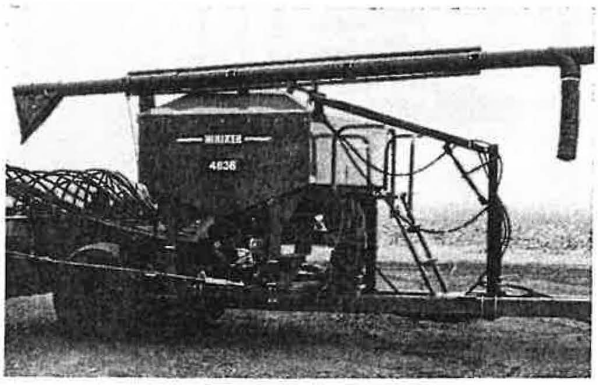


PHOTO NO. 3981

Install seed tube run from seed tank outlet to disc opener. See assembly diagrams on page 26 to 28 for proper length and position of hose running through hose guides.

STEP 31

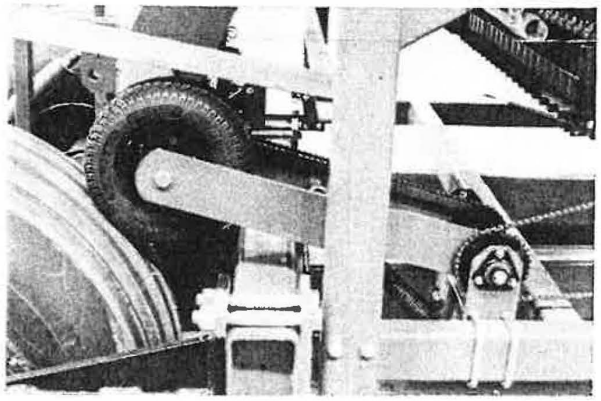
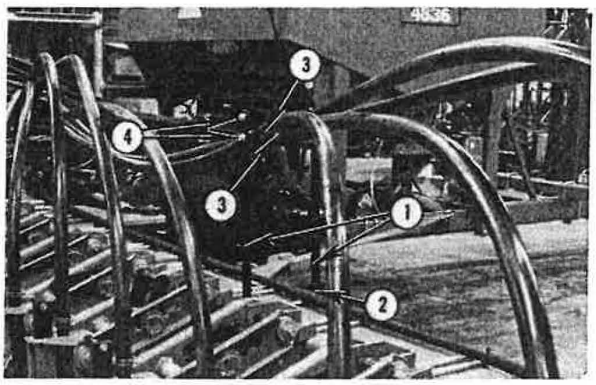


PHOTO NO. 4071

Install seed tubes through front hose rest.

NOTE: Seed tubes must run on top of shield over drive wheel.

STEP 32
40 FOOT TOOLBAR ONLY

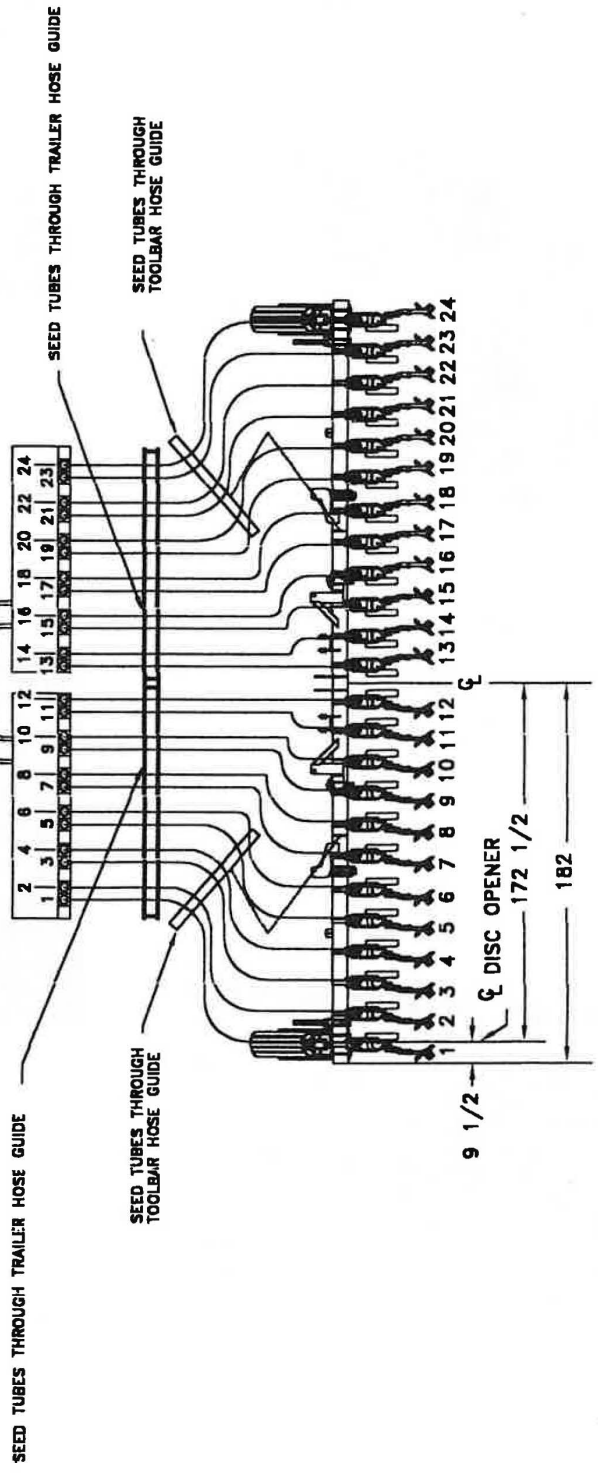


RH Shown PHOTO NO. 3983

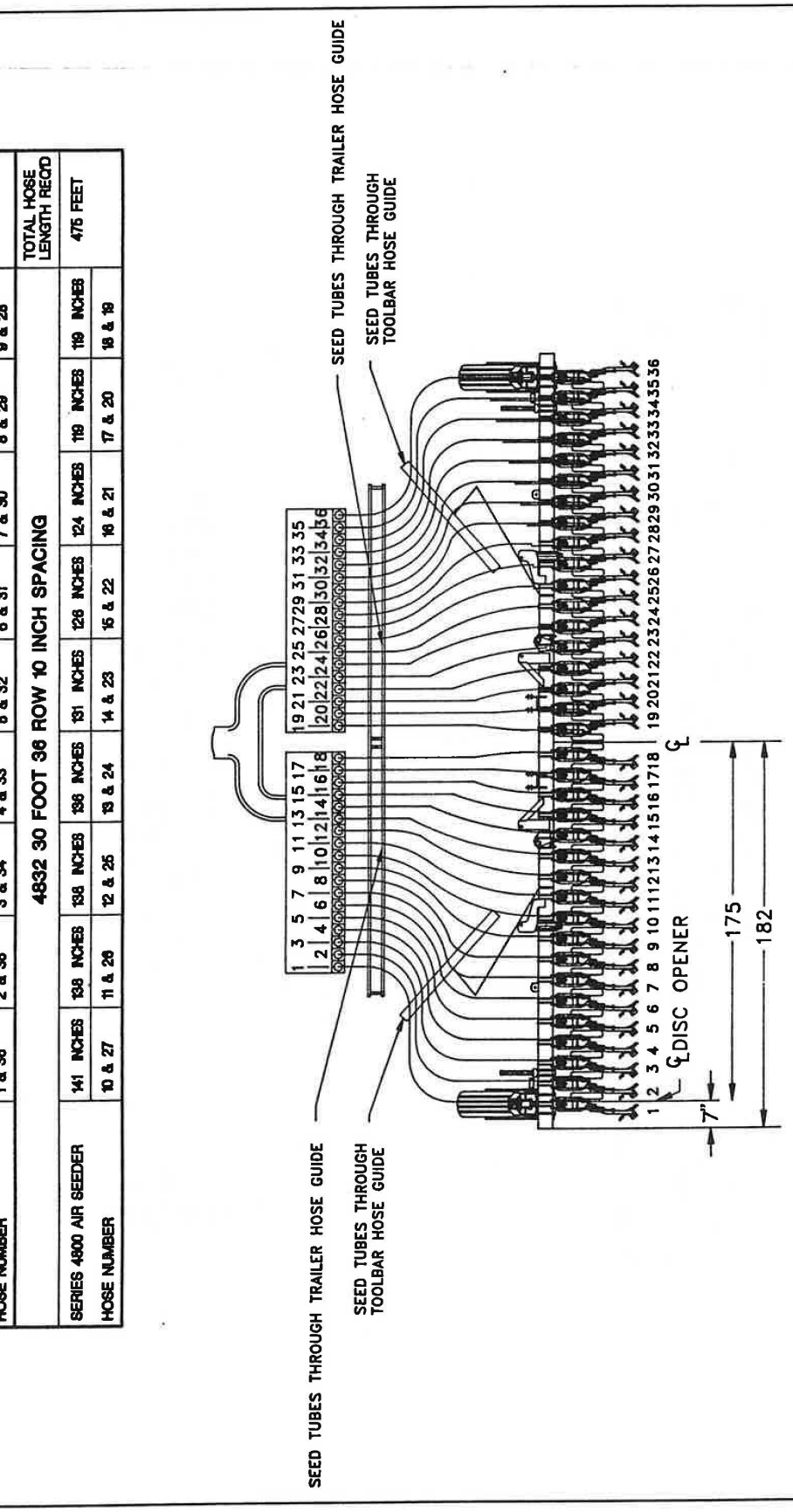
Install (2) outer wing seed tube support straps (arrow 1) using (2) 1/2 x 8 1/2" hex bolt (arrow 2) with lockwasher and hex nuts. Install (2) cross straps (arrow 3) using (4) 3/8 x 1 1/2" hex bolt (arrow 4) with lockwasher and hex nuts.

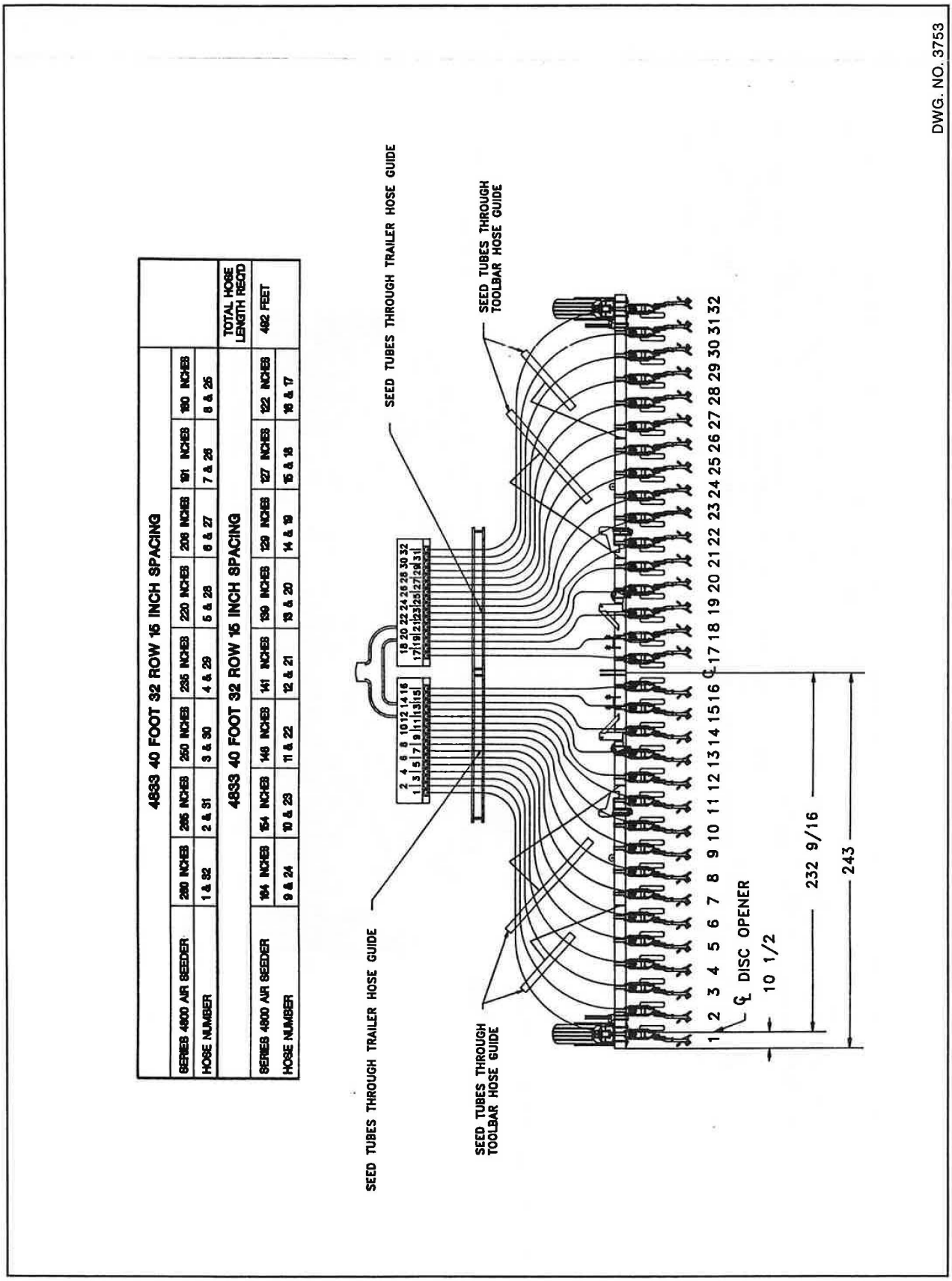
NOTE: Number of seed tubes in support stand depends on number of outer toolbar disc openers.

4831 30 FOOT 24 ROW 15 INCH SPACING							
SERIES 4800 AIR SEEDER	220 INCHES	206 INCHES	191 INCHES	180 INCHES	165 INCHES	154 INCHES	
HOSE NUMBER	1 & 24	2 & 23	3 & 22	4 & 21	5 & 20	6 & 19	TOTAL HOSE LENGTH REQ'D 320 FEET
4831 30 FOOT 24 ROW 15 INCH SPACING							
SERIES 4800 AIR SEEDER	146 INCHES	139 INCHES	129 INCHES	127 INCHES	122 INCHES	120 INCHES	
HOSE NUMBER	7 & 18	8 & 17	9 & 16	10 & 15	11 & 14	12 & 13	



4832 30 FOOT 36 ROW 10 INCH SPACING											
SERIES 4800 AIR SEEDER	222 INCHES	212 INCHES	203 INCHES	192 INCHES	183 INCHES	177 INCHES	166 INCHES	157 INCHES	151 INCHES		
HOSE NUMBER	1 & 36	2 & 35	3 & 34	4 & 33	5 & 32	6 & 31	7 & 30	8 & 29	9 & 28		
4832 30 FOOT 36 ROW 10 INCH SPACING										TOTAL HOSE LENGTH REQ'D	
SERIES 4800 AIR SEEDER	141 INCHES	138 INCHES	136 INCHES	136 INCHES	131 INCHES	126 INCHES	124 INCHES	119 INCHES	119 INCHES	475 FEET	
HOSE NUMBER	10 & 27	11 & 26	12 & 25	13 & 24	14 & 23	15 & 22	16 & 21	17 & 20	18 & 19		




4833 40 FOOT 32 ROW 15 INCH SPACING
SERIES 4800 AIR SEEDER
HOSE NUMBER
280 INCHES
1 & 32
285 INCHES
2 & 31
250 INCHES
3 & 30
235 INCHES
4 & 29
220 INCHES
5 & 28
206 INCHES
6 & 27
191 INCHES
7 & 26
180 INCHES
8 & 25
TOTAL HOSE LENGTH RECQD
4833 40 FOOT 32 ROW 15 INCH SPACING
SERIES 4800 AIR SEEDER
HOSE NUMBER
164 INCHES
9 & 24
154 INCHES
10 & 23
146 INCHES
11 & 22
141 INCHES
12 & 21
130 INCHES
13 & 20
129 INCHES
14 & 19
127 INCHES
15 & 18
122 INCHES
16 & 17
492 FEET
SEED TUBES THROUGH TRAILER HOSE GUIDE
SEED TUBES THROUGH TOOLBAR HOSE GUIDE
SEED TUBES THROUGH TRAILER HOSE GUIDE
SEED TUBES THROUGH TOOLBAR HOSE GUIDE
2 4 6 8 10 12 14 16
1 3 5 7 9 11 13 15
18 20 22 24 26 28 30 32
17 19 21 23 25 27 29 31
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
℄ DISC OPENER
10 1/2
232 9/16
243
DWG. NO. 3753

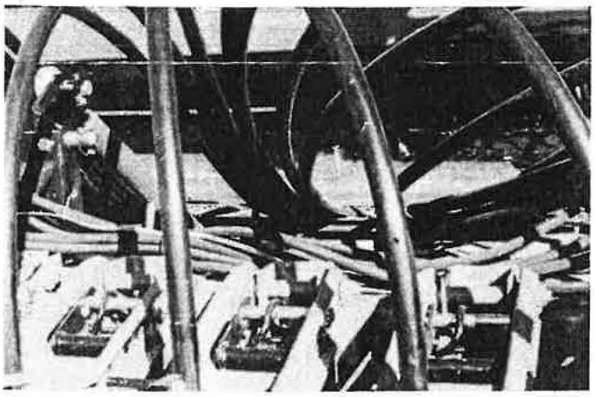


PHOTO NO. 4072

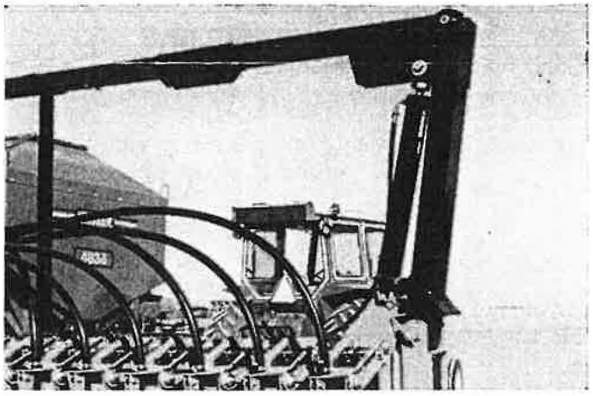


PHOTO NO. 4069

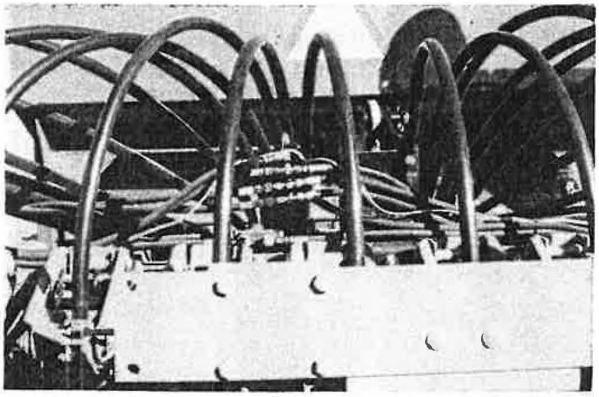


PHOTO NO. 4073

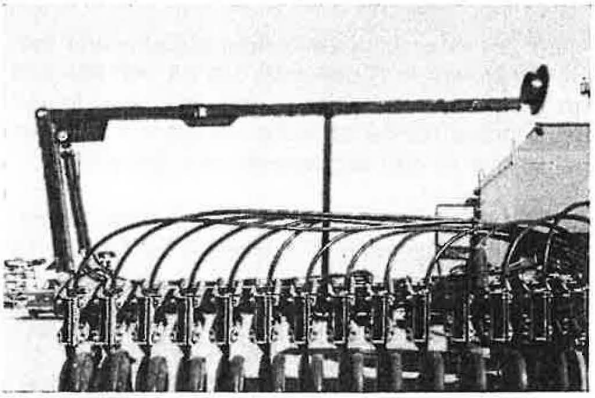


PHOTO NO. 4070

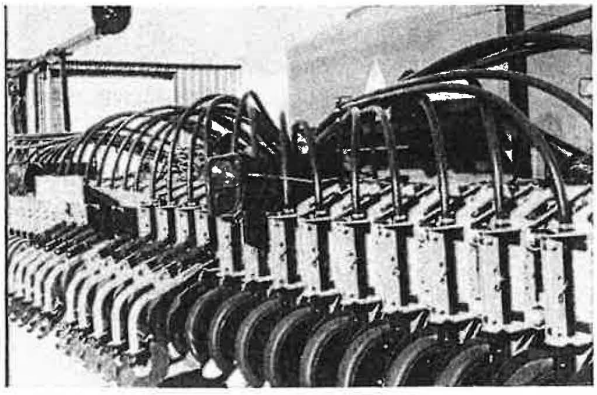
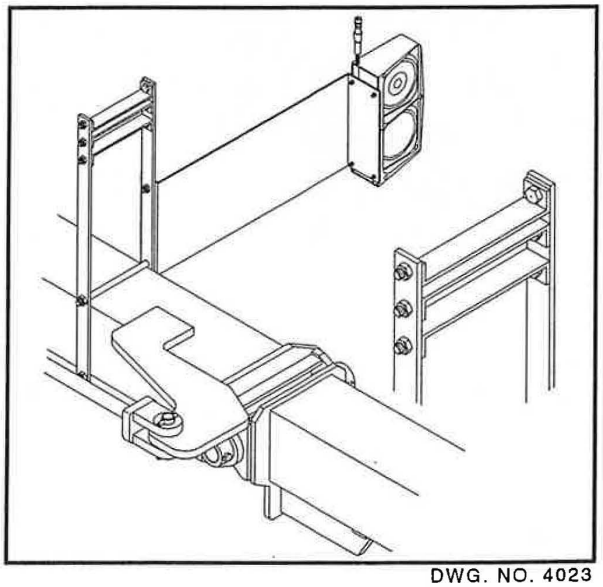
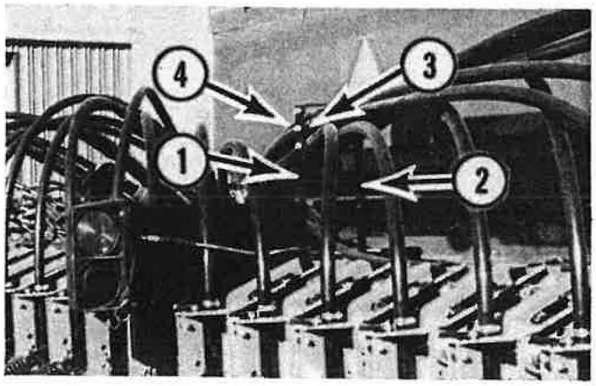


PHOTO NO. 4074



DWG. NO. 4023

STEP 33
30 & 40 FOOT TOOLBAR

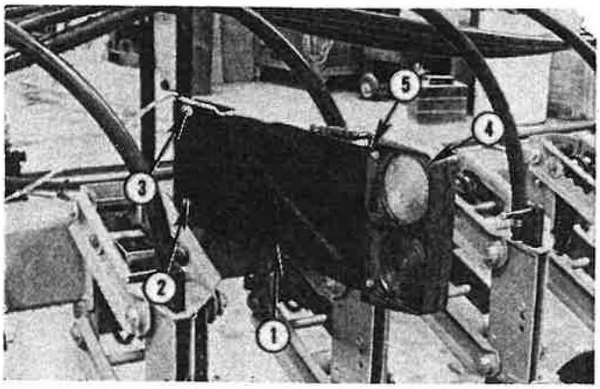


RH Shown PHOTO NO. 4060

Install (2) inner wing seed tube support and vertical strap (arrow 1) using (2) 1/2 x 8 1/2" hex bolt (arrow 2) with lockwasher and hex nut. Install cross straps (arrow 3) using (4) 3/8 x 1 1/2" hex bolt (arrow 4) with lockwasher and hex nuts.

NOTE: Number of seed tubes in support stand. 5 tubes in upper mount, 4 in lower for 30 foot 10 inch spacing.

STEP 34



RH Shown PHOTO NO. 3985

Install right and left hand light mount bracket (arrow 1) using (1) 1/2 x 8 1/2" hex bolt (arrow 2) and (1) 3/8 x 1 1/2" hex bolt (arrow 3) with lockwasher and hex nuts. Install light (arrow 4) using (4) 1/4 x 1 1/4" hex bolts (arrow 5) with 1/4" whiz nuts.

NOTE: Amber and red light will be visible from rear when toolbar is in transport.

STEP 35

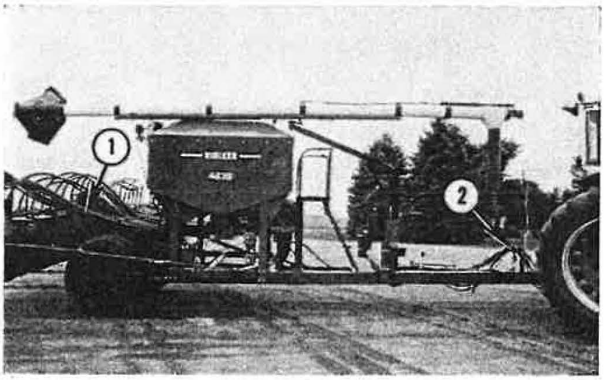


PHOTO NO. 3986

Continue to install all electrical wires using wiring diagram on page 32. Run rear light wire through rear pivot pin holder (arrow 1) and front 7-point plug wire through front loop (arrow 2).

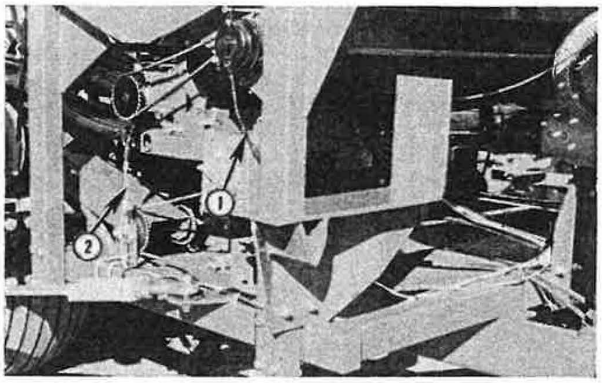


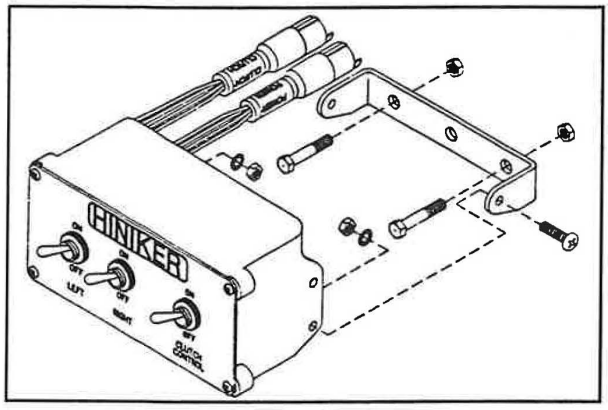
PHOTO NO. 3942B

Continue to install dual electric clutch wiring (arrow 1) and blocked seed detector wiring (arrow 2). Use wiring diagram on page 32.

CONSOLE INSTALLATION

CONSOLE INSTALLATION

Select an easily accessible area to mount the console in the tractor cab. 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.



DWG. NO. 3638

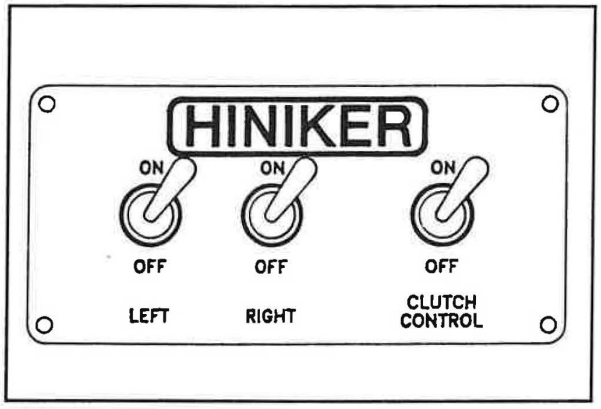
Attaching the lead with the circuit breaker to the positve battery terminal and the remaining lead to the negative terminal.

Route the 10 foot clutch cable from the clutch switch box to the hitch area of the tractor. Connect the 20 foot clutch cable to the 10 foot cable and route along the left tongue to the Seeder bin support. Connect the clutch "y" cable to the 20 foot cable and route to the clutches. The 2 pin connector with the Green and Black wires connects to the clutch on the right side and the 2 pin connector with the Red and Black wires connects to the clutch on the left side. Secure all wiring to the top of frame members to prevent possible damage by pinching or chafing.

NOTE: Allow room at the hitch for proper turning.

CLUTCH OPERATION

The Clutch Control Box has three switches. The two left most switches, labeled Left and Right, will determine which clutches will operate when the Clutch Control Switch is activated. The Clutch Control Switch, located on the right, is the master clutch control. This allows the ability to turn on either or both clutches with one switch.



DWG. NO. 3639

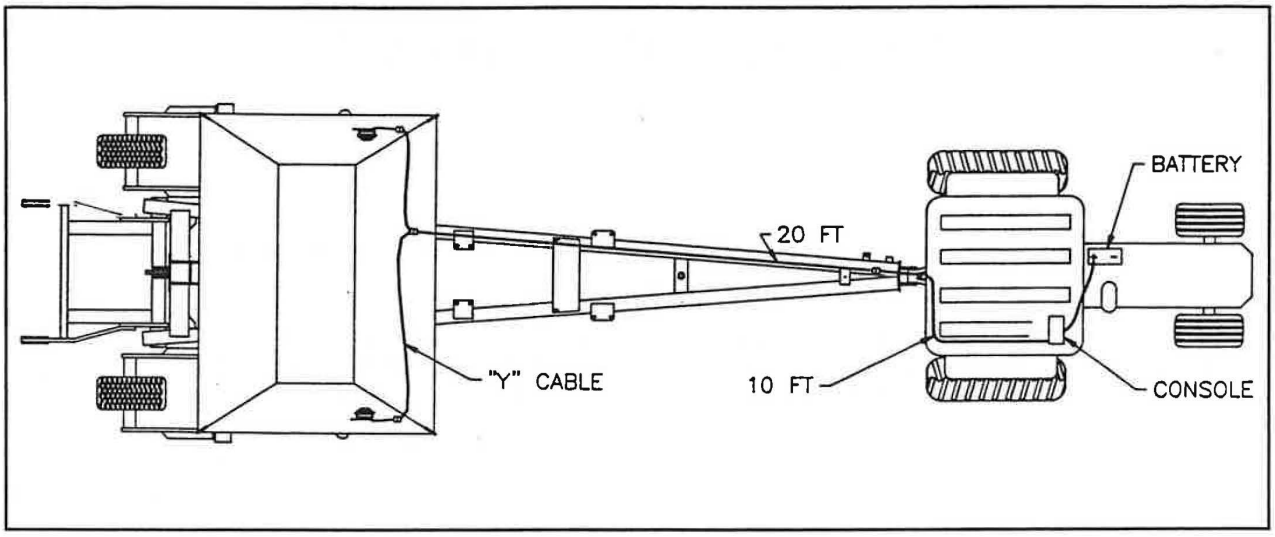
Once the electric clutch is turned on, and the electric clutches engage activating the seed metering mechanism, a time delay will occur before the metered seed reaches the disc opener unit.

NOTE: Because the 4800 seeder has a ground wheel drive arrangement, the seeder must be in motion before the seed can be metered and delivered to the ground engaging seed boots.

Because of the previously mentioned start up time delay, "skips" could occur when stopping and starting the 4800 seeder in the field. To prevent these "skips" or unseeded areas, it may be necessary on headlands to turn seeder switch on approximately 10 feet before entering seeding point.

32 Console Installation

NOTE: Lower seed rates will require a greater distance. To determine correct distance for your seed rate, place a start flag and travel forward. Watch for seed coming out of seed boots, stop and measure that distance.



DWG. NO. 3640

4800 OPERATIONAL PROCEDURES

DEALER LOT
(manual page number in parenthesis)

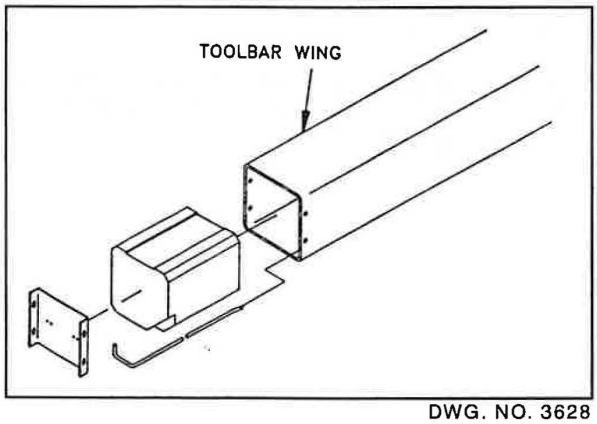
- Level frame parallel to ground. (See page 10 in Operators Manual.)
- Make sure 3rd arm parallel to lower arms.(See page 17 in Operators Manual.)
- Fold and unfold unit 6 or more times to purge air from hydraulic lines.
- Make sure wing guides against stop before lifting LA wheels for transport. (See page 15 in Operators Manual.)
- Make sure latch drops over cam into slot. If latch doesn't clear cam or is more than 1/2" away, add or remove spacers between trasnport lock weldment and frame. (See page 15 in Operators Manual.)
- Set fan at 11 ounces. Increase only for high seed rates or very large seed size. (See page 27 in Operators Manual.)
- Remove expansion plugs in manifolds and blow out dust and debris. (See page 44 in Operators Manual.)

ASSEMBLY-OPTIONAL EQUIPMENT

BALLAST WEIGHT

ORDER ITEM NUMBER	DESCRIPTION
810-001-176	Concrete block 22 lbs. each.

QUANTITY REQUIRED	
30 Foot Toolbar	22
40 Foot Toolbar	38



DWG. NO. 3628

To add additional weight to toolbar, concrete blocks can be ordered. Install concrete blocks as shown.

NOTE: Position of block pull rod and large corner notch to the inside.

WEIGHT BRACKET

ORDER ITEM NUMBER	DESCRIPTION
80305512	Weight Bracket Components

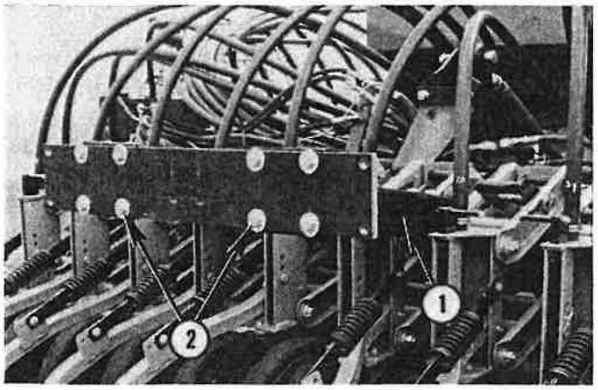


PHOTO. NO. 3988

Install tractor front suitcase weight mounting bracket (arrow 1), using (4) 5/8" u-bolts and (8) 5/8" lockwashers and (8) hex nuts (arrow 2).

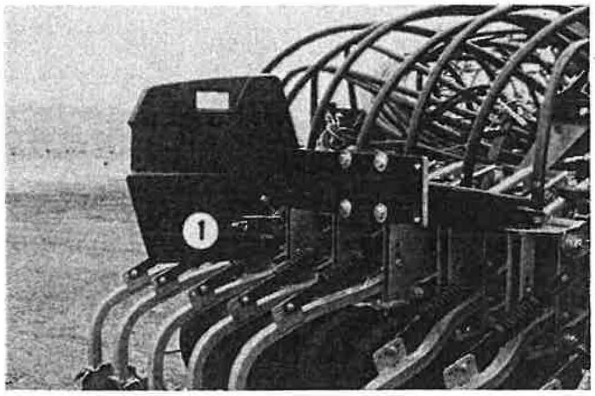


PHOTO NO. 3989

Case/IH suitcase weights fit this mounting. The clamping lock (arrow 1) fits on the bottom edge of mounting bracket.

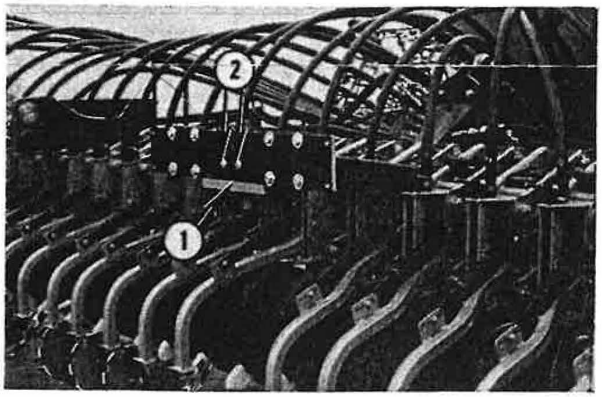


PHOTO NO. 3990

To fit JD suit case weights, lower support (arrow 1) must be installed using (2) 5/8 x 2" carriage bolts with (2) 5/8 lockwashers and (2) 5/8 hex nuts (arrow 2).

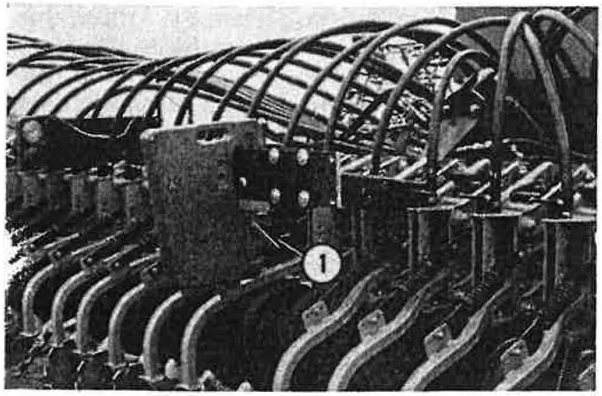
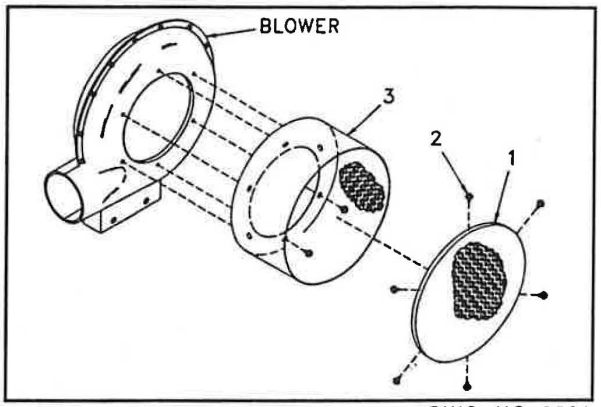


PHOTO NO. 3991

Shown in photo: JD suitcase weight attached to weight bracket assembly. Notice locking stud in the middle (arrow 1). A minimum of (2) suit case weights must be used. Secure with through bolts.

AIR BLOWER SCREEN

ORDER ITEM NUMBER	DESCRIPTION
80305510	Blower Screen Components



DWG. NO. 3631

To avoid clogging the air inlet screen of the air blower with possible debris, a cylindrical screen is offered as an option. The cylindrical screen has a larger surface area compared to the flat screen offered with the 4836 tank/trailer. The additional surface area still allows enough air to flow into the air blower even if debris begins to clog the screen.

The cylindrical screen is attached to the blower using the (6) 1/4" self tapping screws and washers that are currently used to attach the flat screen onto the blower. The screen cover is attached to the cylindrical screen with (6) 1/4" self tapping screws which are included with this option.

FILL AUGER

ORDER ITEM NUMBER	DESCRIPTION
80305509	Fill Auger Components

A fill auger can be ordered as an option with the unit. You have a choice of either an auger made by Kasco Manufacturing or Remlinger Manufacturing. Included with the fill auger are the components needed for it's support. The fill auger support is attached to the trailer and allows the fill auger to rotate easily for use in the field or for transporting.

First, the front and rear support brackets must be attached to the tank. Two people will be needed for this operation. The front bracket (arrow 1) is attached at the front of the tank on the right side. The rear bracket (arrow 2) is attached at the rear of the tank, also on the right side. The brackets are attached by first removing the first (2) 5/16 whiz lock bolts (arrow 3) on the right side of the tank. One person will need to get inside the tank to hold the whiz lock nuts as the bolts are being removed.

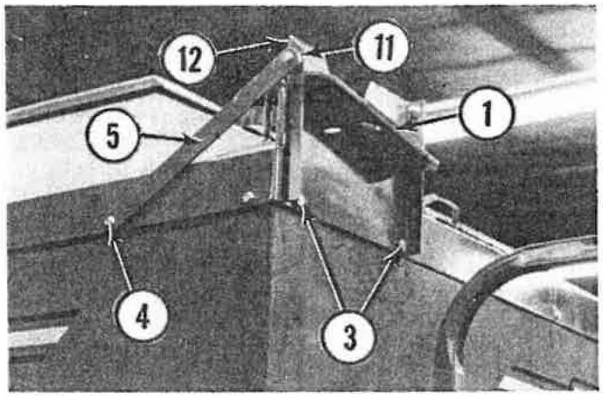


PHOTO NO. 4147

Remove the (4) 5/16 whiz bolts and discard. Drill out the four holes to 17/32 diameter. Line up the bottom holes of the front and rear support brackets. Insert the 1/2 by 1 1/2" long (Item 3) bolts through the 3 pieces and secure using 1/2 whiz locknuts.

Remove the second 5/16 whiz bolt (Item 4) from the front on the right side of the tank. Secure the front top (17 3/4") (Item 5) to the front auger support weld using a 3/8 by 1 1/4 bolt and whiz nut. (Item 12).

Put (8) 3/8 flat washers (Item 11) between the front strap and front auger support weld. Secure the other end of the strap to the second hole in the right side of the tank using the 5/16 x 3/4 whiz bolt and whiz nut.

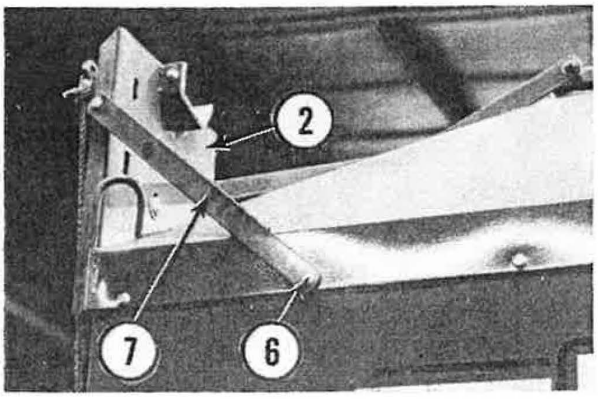


PHOTO. NO. 4148

Remove the second 5/16 whiz bolt from the right rear side of the tank (item 6). Attach the 20" long side strap (item 7) to the tank using the bolt just removed. Fasten the strap to the rear auger support weld using a 3/8 x 3/4 bolt and whiz locknut.

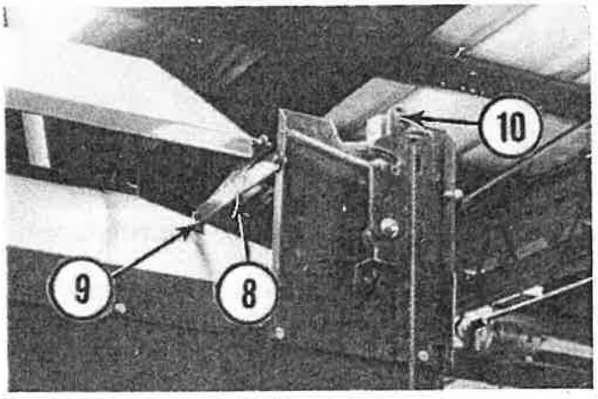


PHOTO NO. 4149

Fasten the 17" long strap (Item 8) to the rear auger support using a 3/8 x 3/4 bolt and whiz nut. Remove the 3/8 by 1 bolt and the (2) 3/8 locknuts used to attach the cover weld to the tank (arrow 9). Use a 3/8 by 1 1/2 full thread bolt to secure the rear strap (Item 8) to the lug on the rear hopper top half weld.

Put a two way locknut on the bolt as a spacer between the lug and the strap. Secure the strap using a 3/8 locknut. Make sure the strap is free to move.

Secure the end of the 84 inch rope to latch (arrow 10) as shown in photo.

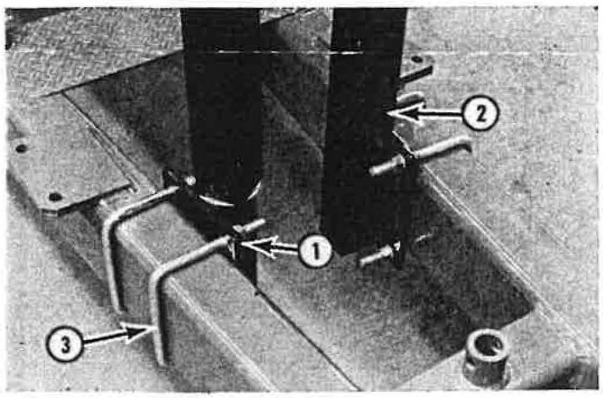


PHOTO NO. 4067

Attach the pivoting outer tube weld (arrow 1) of the support assy. to the right trailer tongue in front of the front mounting plate, using (2) of the 5/8" u-bolts provided (arrow 3).

Attach t e lower support weld (arrow 2) to the left side of the trailer in front of the front mounting plate, using the other (2) 5/8" u-bolts. Make sure the upper braces of the lower support weld face toward the center of the trailer.

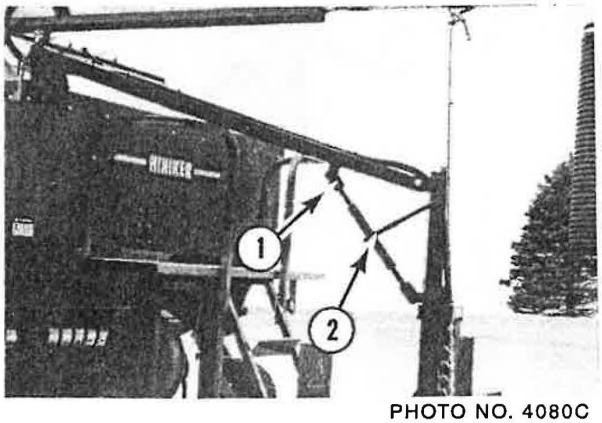


PHOTO NO. 4080C

Pin ratchet jack assembly to swing arm (arrow 1) with tahe pin provided. Install ratchet jack lever (arrow 2) with the pin provided.

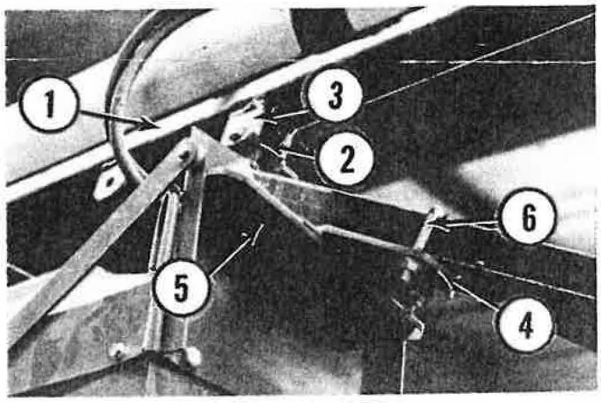


PHOTO NO. 4146

Install fill auger assembly (arrow 1) on to the swing arm pivot (arrow 2). The Kasco auger has pivot bracket in place. The Reminger auger two support tab (arrow 3) must be welded onto bottom channel. See (page 39) for proper location.

Install front lock plate (arrow 4) by lowering swing arm into front support (arrow 5) as shown in photo. Secure with 1/2 u-bolt (arrow 6) and 1/2" whiz nuts.

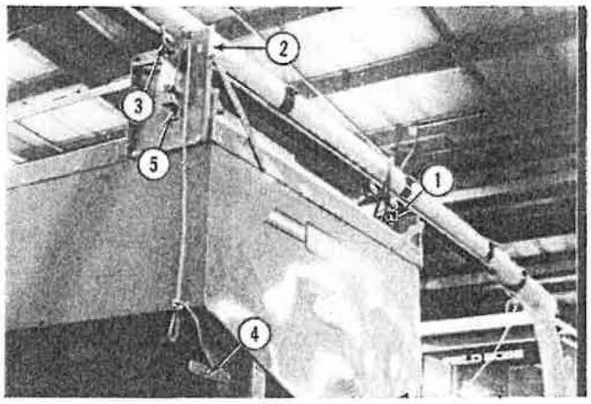
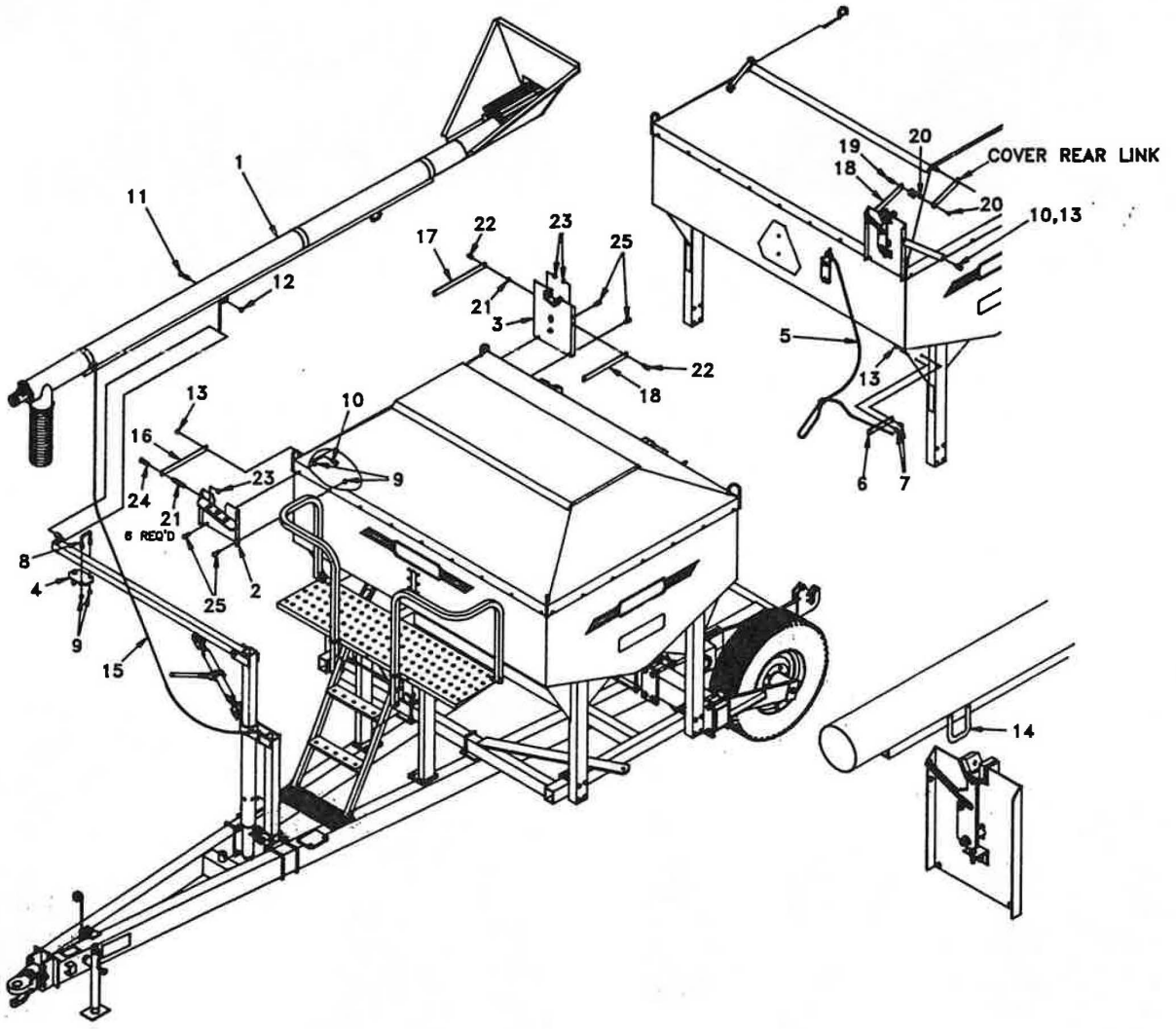


PHOTO NO. 4138A

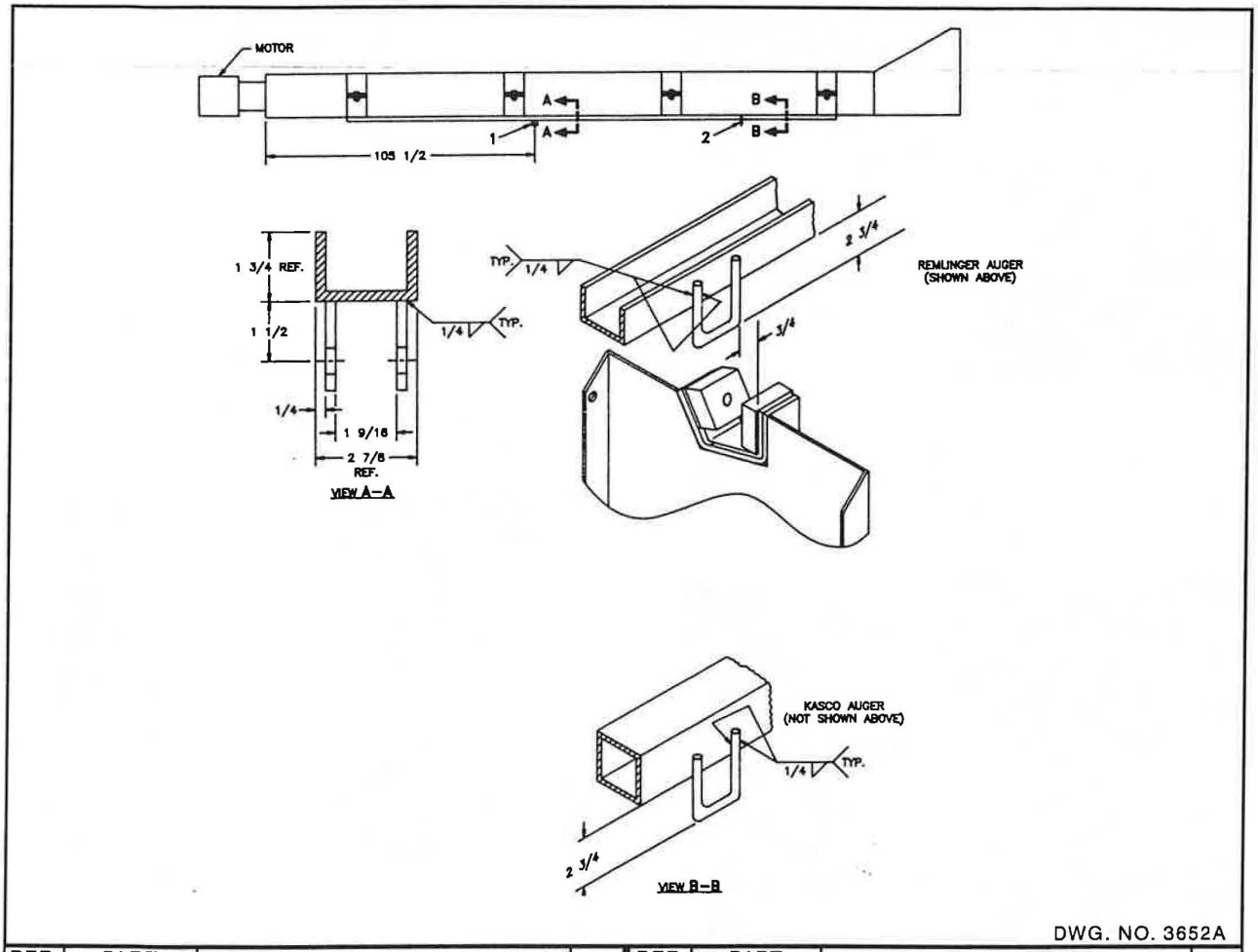
With fill auger anchor will at front (arrow 1), swing auger into rear support assy. (arrow 2). Weld horseshoe tab (arrow 3) in place, see (page 39) for proper location. Install lock lever (arrow 4) using (2) 5/16 x 1 hex bolt provided. Tie a loop in rope to hold latch open and secure end of rope in lock lever as shown in photo.

NOTE: After horseshoe tab has been welded on, position of latch can be changed (arrow 5) to insure latch to lock.



DWG. NO. 3672B

REF. NO.	PART NUMBER	DESCRIPTION	QTY	REF. NO.	PART NUMBER	DESCRIPTION	QTY
1		Remlinger or Kasco		14	80305520	Horse Shoe Tab	1
2	80305651	Front Auger Support Assy	1	15	80305578	Rope	1
3	80305632	Rear Auger Support Assy	1	16	80504734	Front Strap 17 3/4 Long	1
4	622684	Tarp Strap	2	17	80504733	Side Strap 20" Long	1
5	80305530	Rod	1	18	80504732	Rear Strap 17" Long	1
6	80305531	Handle Lever	1	19	700-20099	HHCS 3/8-16 NC Full THF x 1 1/2	1
7	950-001-110	Hex Head Cap Screw 5/16-18 x 1 Gr. 5	2	20	951-005-051	Lock Nut 3/8-16 NC 2-Way	2
8	033-12007	5/16 Flat Washer SAE PL	1	21	952-002-003	3/8 Flat Washers	9
9	80305532	Spacer	1	22	950-001-089	HHCS 3/8-16 NC x 3/4	2
10	950-002--006	Bolt-HHFL WZLK 5/16-18 x 3/4	1	23	951-002-003	Whiz Nut 3/8-16 UNC	3
11	031-06308	HHCS 5/8-11 UNC x 2 3/4 Gr. 5	1	24	950-001-106	HHCS 3/8-16 UNC x 1 1/4 Lg Gr. 5	1
12	951-005-044	Lock Nut 2-Way 5/8-11	1	25	950-001-125	HHCS 1/2-13 NC x 1 1/2 Lg	4
13	951-002-002	Nut-FL WZLK 5/16-18	2	26	951-002-004	Whiz Nut 1/2-13 NC	4



DWG. NO. 3652A

REF. NO.	PART NUMBER	DESCRIPTION	QTY	REF. NO.	PART NUMBER	DESCRIPTION	QTY
1	80305519	Support Tab	2	2	80305520	Horseshoe Tab	1

NOTE: If auger is not balanced properly, the auger clamps can be loosened, and the auger moved forward or backward, depending upon proper balance of the auger.

REMINGER AUGER

To prepare the Remlinger Auger for proper installation, a small amount of welding is needed. Two support tabs need to be welded to the channel, as shown in view A-A of the drawing above. A horseshoe tab also needs to be welded to the channel, as shown in the top drawing of view B-B. The horseshoe tab must be welded 81 1/2 inches from the support tabs. After installing the auger onto the support, if auger is not balanced properly, the clamps can be loosened and the auger moved until it is balanced.

KASCO AUGER

To prepare the Kasco Auger for proper installation, a small amount of welding is needed. Unlike, the Remlinger auger, the support tabs are already welded to the tubing provided with the auger. The horseshoe tab still needs to be welded 81 1/2 inches from the support tabs as shown in the bottom drawing of view B-B. After installing the auger onto the support, if auger is not balanced properly, the clamps can be loosened and the auger moved until it is balanced.

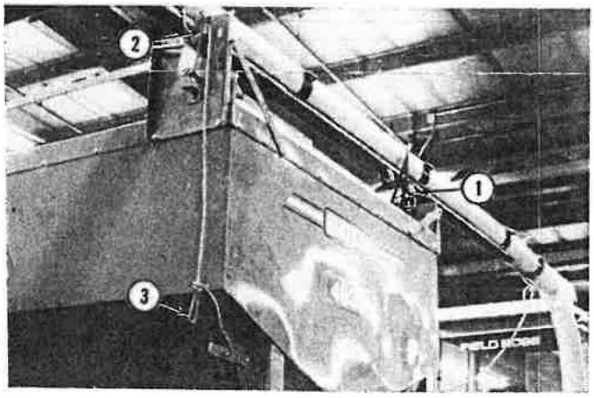


PHOTO NO. 4138B

With fill auger secured at front (arrow 1) and at rear (arrow 2), check the 84 inch rope loop (arrow 3) in the correct place, to lock when the rope is released.

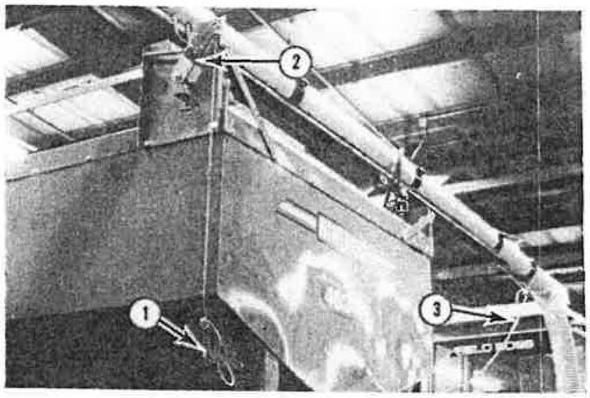


PHOTO NO. 4139A

Also check with rope loop (arrow 1) will hold latch open (arrow 2).

To remove fill auger at rear install 120 inch rope (arrow 3) at front of fill auger as shown in photo.

4836 AIRSEEDER FILL AUGER POSITIONING

The Fill Auger is designed for one-man operation; however, two important instructions must be followed.

1. The auger must be balanced in the support assembly with slightly more weight on the hopper end.

2. A rope must be attached to the forward clamp on the support frame.

Follow the pictured sequential procedure. To unfold, fill auger to working position.

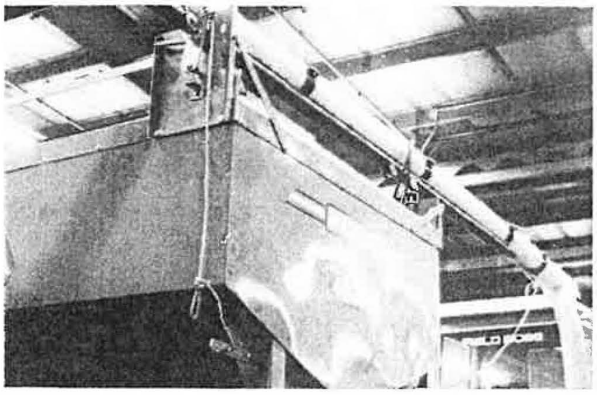


PHOTO NO. 4138

1. Starting with the fill auger in locked position in front with ratchet pulling down on front auger, support and latch pull down in the rear auger support.

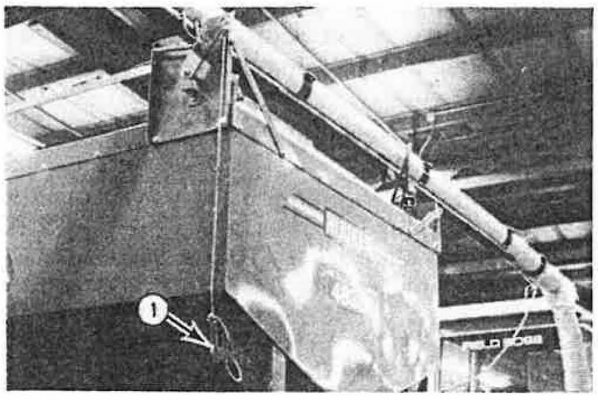


PHOTO NO. 4139

2. To unfold fill auger, by first pulling latch rope and secure loop in lock lever (arrow 1).

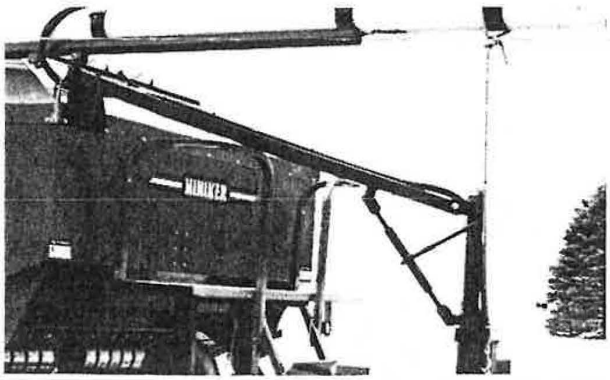


PHOTO NO. 4080

3. Ratchet auger out of front auger support.

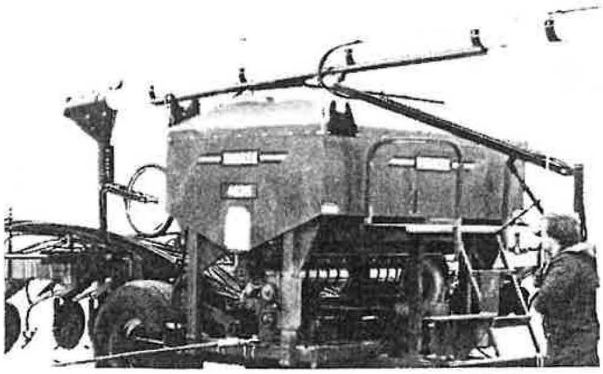


PHOTO NO. 4081

4. Pull rope to lift auger out of rear cradle and maneuver to the desired position. With the hopper end of auger on the ground, lower the auger to the correct height for filling, by using the ratchet. Reverse procedure for transport. Make sure the auger is secured both in the front and rear saddle before transport.

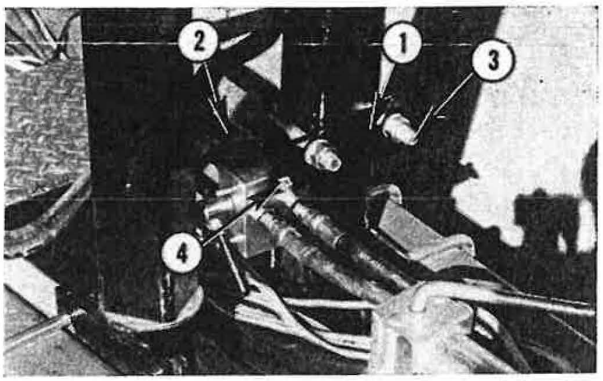
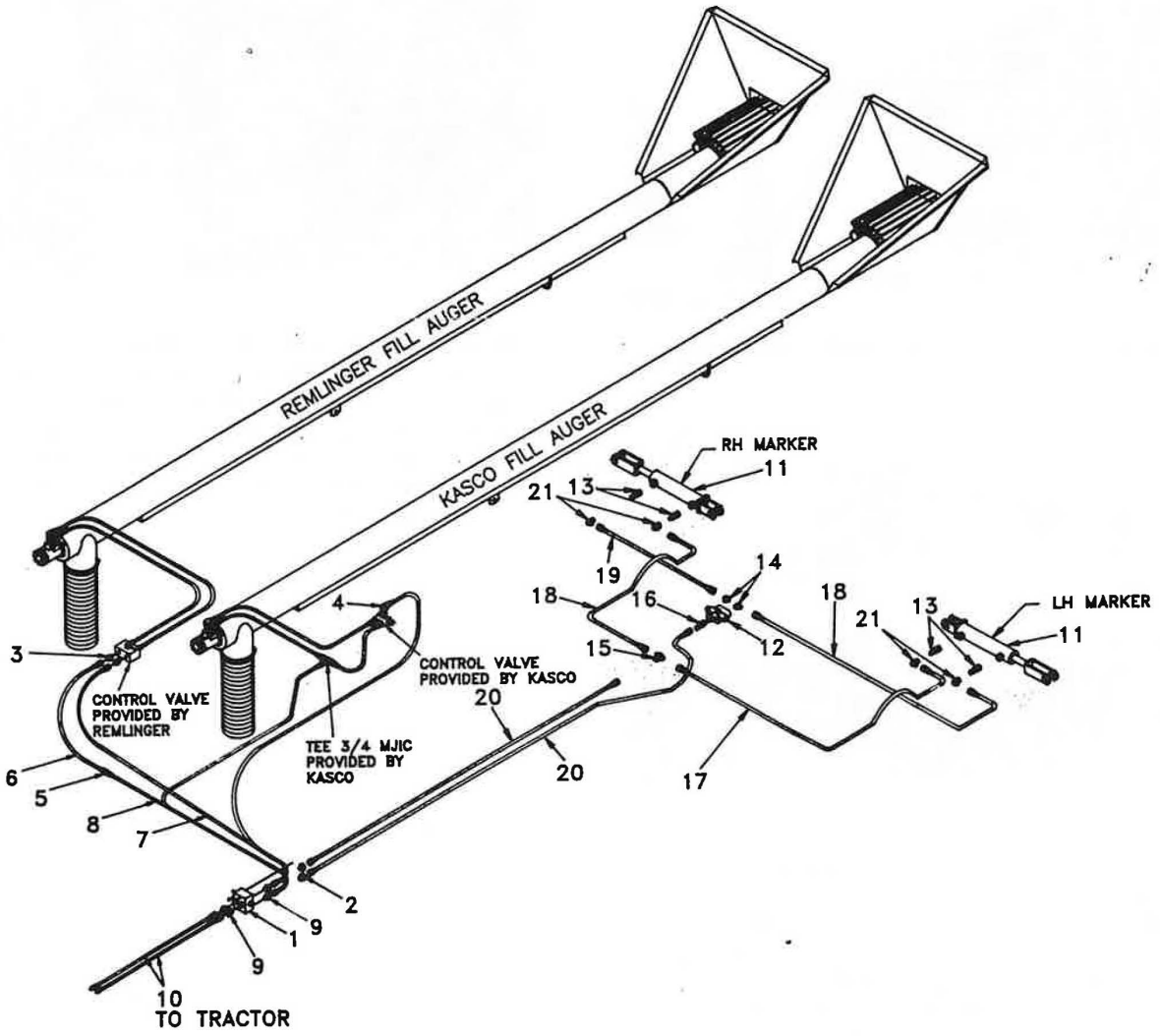


PHOTO NO. 3997

Install hydraulic selector valve using selector valve anchor (arrow 1) and rear strap (arrow 2) with (2) 3/4 x 4" hex bolt (arrow 3) and (2) lockwashers and hex nuts. Install (1) 5/16 x 1 3/4" hex bolt (arrow 4) with whiz lock nut. Install hydraulic plumbing as shown in diagram on page 42.

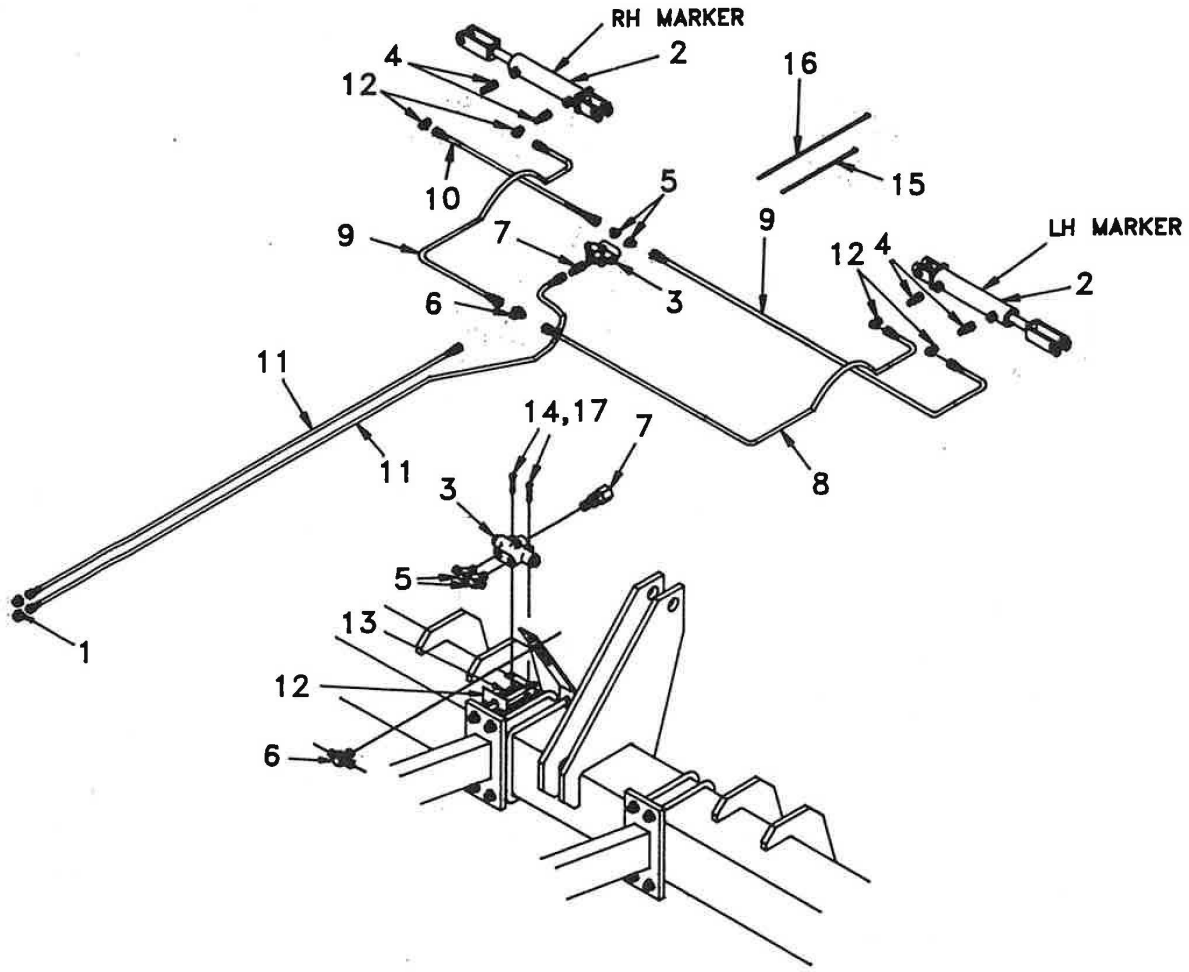
OPTIONAL HYDRAULICS
MARKERS & FILL AUGERS



HINIKER P/N 80305509, 80305585 & 80305586 DWG. NO. 3779A

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	80305516	HYD Valve	1	13	956-008-024	Restrictor Fitting	4
2	203-35510	O-Ring Pipe Plug	2	14	956-005-001	Fitting-Elbow 90°	2
3	956-003-003	Fitting-Straight Adapter 1/2 MNPT x 9/16 MJIC	2	15	956-007-003	Fitting-Tee	1
				16	956-003-001	Fitting STR. APT. 3/4 ORB x 9/16 MJIC	1
4	956-005-003	Fitting-Elbow 90° 1/2 MNPT x 9/16 MJIC	1	17	957-001-074	40' Hose Assy 3/8 x 240"	1
5	206-01019	Union 3/4 MJIC (2)	1		957-001-034	30' Hose Assy 3/8 x 180"	1
6	957-005-021	Hose Assy 3/8 x 50"	1	18	957-001-079	40' Hose Assy 3/8 x 260"	2
7	957-001-074	Hose Assy 3/8 x 240"	1		957-001-077	30' Hose Assy 3/8 x 200"	2
8	957-005-003	Hose Assy 3/8 x 191"	1	19	957-001-080	40' Hose Assy 3/8 x 284"	1
9	956-003-001	STR-ADPT 9/16 MJIC x 3/4 MORB	4		957-001-078	30' Hose Assy 3/8 x 224"	1
10	957-004-016	Hose Assy 3/8 x 126"	2	20	957-004-014	40' Hose Assy 3/8 x 342"	2
11	624129	2 1/2 x 24 CYL Assy PMC #AR-265	2		957-004-014	30' Hose Assy 3/8 x 342" Cut Down To 192" w/9/16 FJIC END	2
12	805-003-026	Sequence Valve	1				
				21	956-005-002	Fitting 90° Elbow	4

HINIKER MARKER HYDRAULICS



HINIKER P/N 80305585, 80305586

DWG. NO. 3777A

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	957-004-014		2	8	957-001-074	40' Hose Assy 3/8 x 240"	1
2	624129	2 1/2 x 24 CYL Assy PMC #AR-265	2		957-001-034	30' Hose Assy 3/8 x 180"	1
3	805-003-026	Sequence Valve	1	9	957-001-079	40' Hose Assy 3/8 x 260"	2
4	956-008-024	Restrictor Fitting	4		957-001-077	30' Hose Assy 3/8 x 200"	2
5	956-005-001	Fitting-Elbow 90°	2	10	957-001-080	40' Hose Assy 3/8 x 284"	1
6	956-007-003	Fitting-Tee	1		957-001-078	30' Hose Assy 3/8 x 224"	1
7	956-003-001	Fitting STR. APT. 3/4 ORB x 9/16 MJIC	1	11	957-004-014	Hose Assy 3/8 x 342"	2
				12	856-005-002	Fitting Below 90° Elbow	4

HINIKER MARKER ASSEMBLY

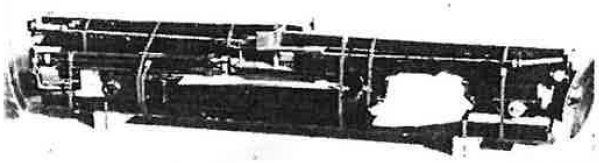


PHOTO NO. 4068

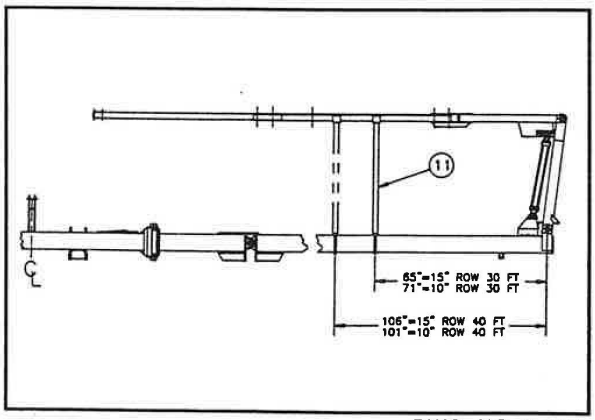
Remove all bands from the shipping bundle. Attach the base tube welds (item 1) using the 1 5/8" by 11" pin. Secure the pin using (2) 3/8" x 2 3/4" bolts, lock washers and nuts. Let the base tube rest on the stops on the wing toolbar end plate. See Photo's 4069 and 4070.

Attach the upper arm welds (item 4) to the base tube welds using the 1 1/2" by 10 1/8" pin and (2) 3/8 x 2 1/2" bolts. Support the end of the upper arm weld using a saw horse.

Attach the right outer marker assembly to the upper arm weld on the right end of the toolbar using a 3/4 x 4 1/2" bolt and two way locknut. **NOTE:** the marker disc throws soil out.

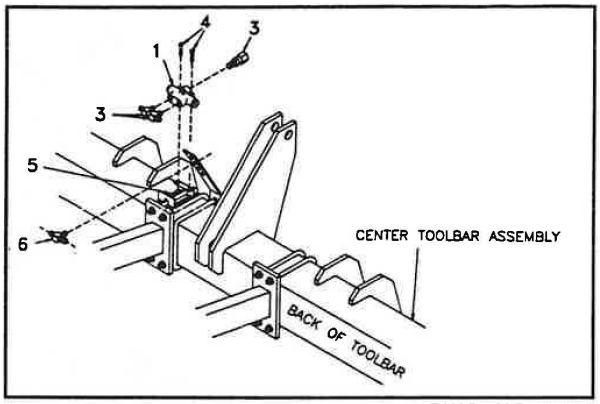
Secure the right outer marker assembly with a 3/8 x 4 1/2" bolt, lockwasher and nut. Do the same on the left side of the machine.

Attach the rest welds to the wing toolbars as shown in drawing number 3762. Secure rest welds using the 3/4 inch u-bolts lockwashers and nuts. Make sure they are at the dimension specified in the drawing.



DWG. NO. 3762A

Attach the valve mounting bracket (item 5) to the center toolbar assembly. Use the two 1/2 hose clamps to secure the valve mounting bracket. If the suitcase weight adapter is installed, use the outer left u-bolt to secure the valve mounting bracket as shown in drawing number 3763.



DWG. NO. 3763

Turn a 3/4 ORB to 9/16 JIC fitting adapter (Item 2) into the in port of the sequence valve. Turn a 90° elbow (Item 3) into both ports on the rear of the sequence valve.

Attach the sequence valve assembly to the valve mounting bracket using (2) 3/8 x 1 1/2" bolts, (Item 4) lockwashers and nuts.See pages 43 and 16 for hydraulic hosing. Attach a 3/8 x 3/8" long hose to the straight adapter going into the sequence valve.

Attach a 3/8 x 3/8" long hose to the bulkhead tee fitting (Item 6) after securing it to the bulkhead plate. Mount the base end of the 2 1/2 x 24" stroke hydraulic cylinders to the wing toolbars using the pin provided with the hydraulic cylinder.

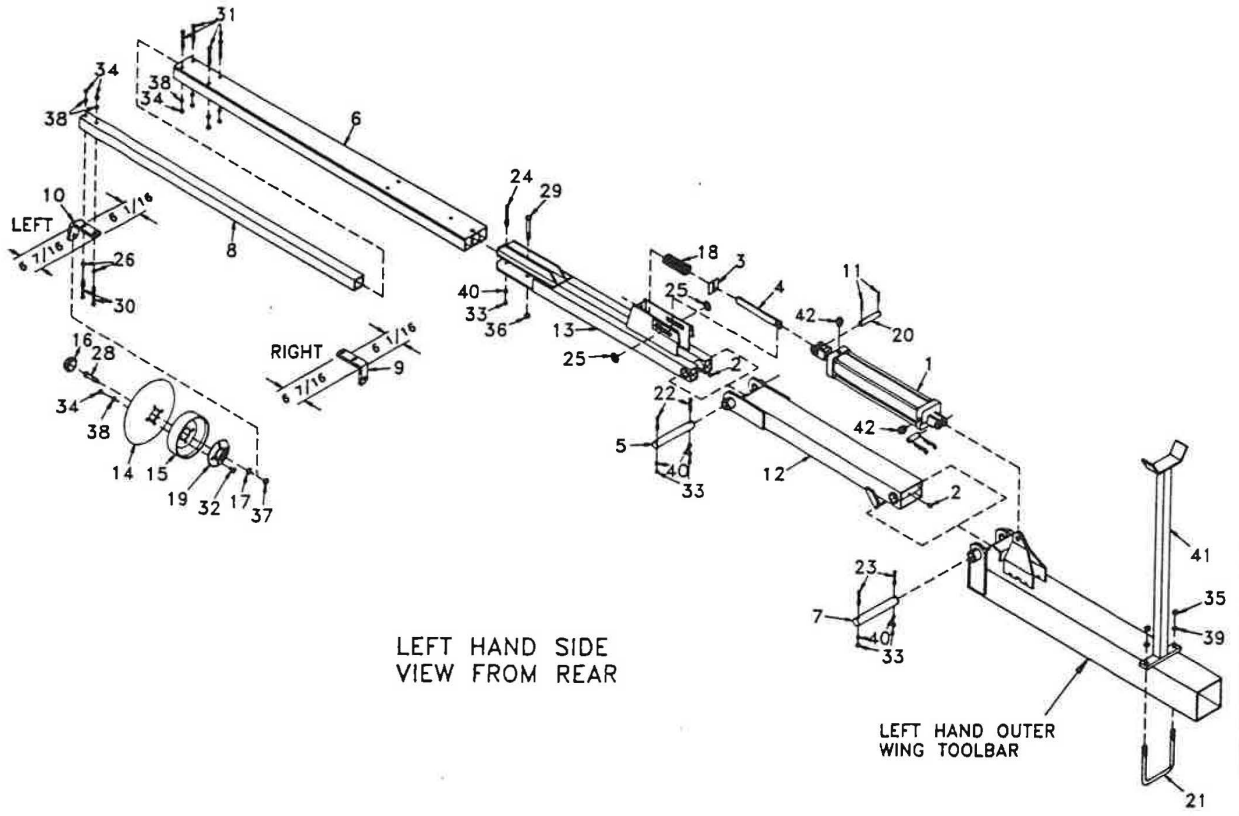
Attach hoses to cylinders using restrictor fitting.

⚠ WARNING: BEFORE ATTACHING HYDRAULIC MARKER CYLINDERS TO MARKER ALL CAPTIVE AIR MUST BE REMOVED FROM THE SYSTEM.

Support marker fold cylinders on wooden blocks so rods can be extended and retracted without interference.

Connect hoses to the tractor. Fully extend and retract marker cylinder at least two times, maintaining hydraulic pressure at full extension for at least 30 seconds. Then extend

MARKER ASSEMBLY
YEAR 2000



DWG. NO. 3790

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	624129	2 1/2 x 24 CYL Assy PMC #AR-265	2	22	031-06111	HHCS 3/8 UNC x 2 1/2 Gr #5 PL	4
2	955-001-002	Grease Fitting 1/4-28	4	23	031-06112	HHCS 3/8 UNC x 2 3/4 Gr #5 PL	4
3	80504749	Slide Plate	2	24	031-06118	HHCS 3/8 x 4 1/2 Gr #5 PL	2
4	80504750	Guide Strap	2	25	952-002-010	Washer-Flat 1 WRT	4
5	80504751	Pin	2	26	952-002-005	Washer-Flat 1/2 WRT	4
6	80504754	Support Tube Weld	2	27	950-001-008	HHCS 3/8-16 x 1 1/2 Gr #2	2
7	80504755	Pin	2	28	950-001-031	HHCS 3/4-10 x 3 Gr #5	2
8	80504756	Adjustable Tube	2	29	950-001-033	HHCS 3/4-10 x 4 1/2 Gr #5	2
9	80504757	RH Disc Mount	1	30	950-001-124	HHCS 1/2-13 x 4 Gr #5	4
10	80504758	LH Disc Mount	1	31	950-001-142	HHCS 1/2-13 x 3 1/2 Gr #5	8
11	953-003-017	Pin-Spring 5/16 x 2	4	32	950-003-028	Bolt-Cge 1/2-13 x 1 1/4 Gr #5	8
12	80504769	Base Tube Weld	2	33	951-001-005	Nut-Hex 3/8-16	12
13	80504778	Upper Arm Weld	2	34	951-001-007	Nut-Hex 1/2-13	20
14	805-001-002	Concave Disc	2	35	951-001-009	Nut-Hex 3/4-10	4
15	805-001-419	Depth Band Weld	2	36	951-005-037	Nut-Lk 2 Way 3/4-10	2
16	805-001-476	Hub Cap Wesbar #1501	2	37	951-005-052	Nut-Jam 3/4-10	2
17	952-004-003	Bushing-Mach 25/32 x 1 1/4 x .075	2	38	952-001-004	Washer-Lk 1/2 Med Split SAE	20
18	81004078	Compression Spring	2	39	952-001-006	Washer-Lk 3/4 Med Split SAE	4
19	81004620	Hub Assy	2	40	952-001-007	Washer-Lk 3/8 Med Split SAE	12
20	850-001-204	Hinge Pin 5 1/8	2	41	80504762	Rest Weld	2
21	875-001-038	U-Bolt Plated	2	42	956-008-024	Restrictor Fitting	4

cylinders one more time, maintaining pressure at full extension for one minute. This allows all air to escape from the marker cylinders.

⚠ WARNING: BE SURE CYLINDERS AND ATTACHING HOSES ARE FULLY CHARGED WITH OIL BEFORE OPERATING SYSTEMS. FAILURE TO DO SO WILL ALLOW MARKERS TO FALL RAPIDLY WHEN ATTEMPTING TO LOWER FROM TRANSPORT POSITION.

Remove the wood blocks and lower the rod end of the cylinder. Attach rod end of the marker lift cylinders to the guide strap between the ears on the upper arm weld. Use the 1 x 5 1/32" pin and secure the pin in the slots using 5/16 by 2 spring pin and flat washers.

Activate the tractor hydraulic system until the marker cylinders are fully extended. Hold the tractor lever in that position for several minutes to purge air out of the system. Cycle the marker system part way up and down several times to purge air from the system. Raise the marker very slowly the first time.

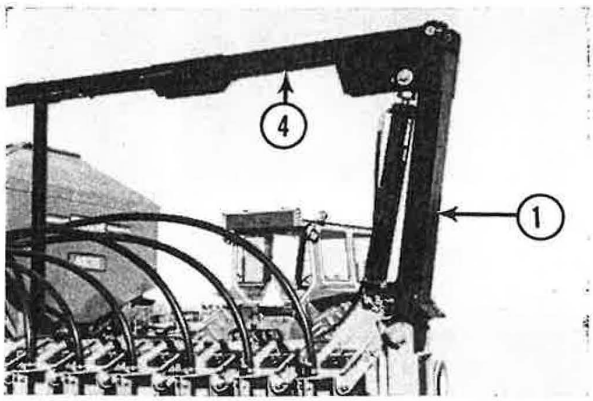


PHOTO NO. 4069

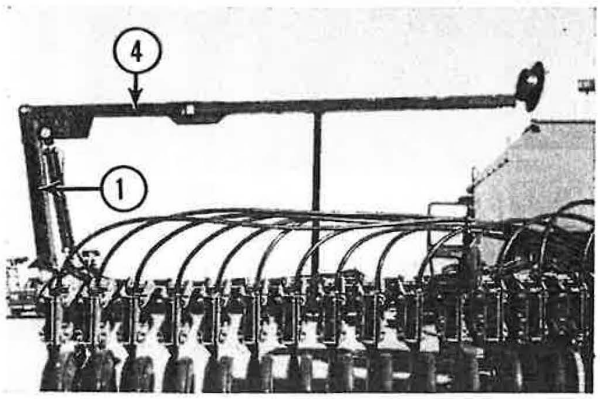


PHOTO NO. 4070

SOIL DEFLECTOR

Remove the parts for the right and left scrapers from the box. Attach the right hand soil deflector bracket (item 1) to the right hand row unit using the 5/16 x 1 carriage bolts (item 2) and 5/16 whiz lock nuts a s shown in photo 4062A. Do the same for the left hand soil deflector bracket on the left row units.

Secure the soil deflector pad (item 3) to the soil deflector bracket using (2) 3/8 x 1 carriage bolts (item 4), lockwashers and nuts as shown in photo 4061A. The carriage bolt must be assembled with the head below the plastic soil deflector pad so that soil and plant material will not catch on the bolts and nuts.

Adjust the bracket and the soil deflector pad so that there is about a 1/8" gap between the soil deflector pad and the row unit coulter as shown in photo 4062A. Tighten all the carriage bolts at this time.

The soil deflector should be adjusted under field conditions as part of setting the air seeder toolbar.

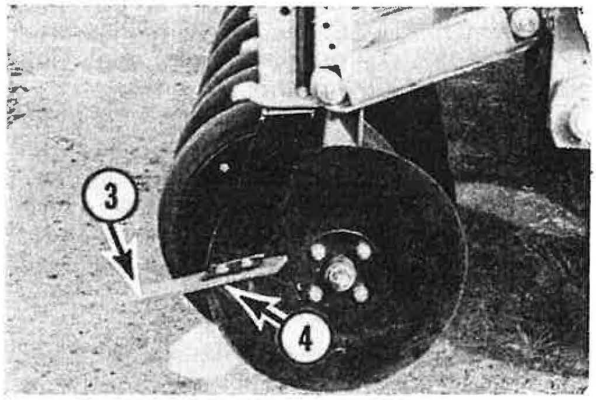


PHOTO NO. 4061A

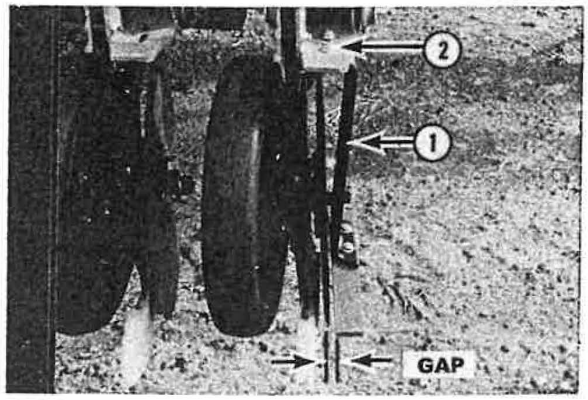


PHOTO NO. 4062A

BIN LEVEL

The Bin Level Sensor is used to detect low bin seed levels. When used in with the 5815 Blocked Seed Tube Detector for model 5824 Seeder or with the 360-010-000 base kit for the model 4836 Seeder, the system will warn the operator when the seed level falls below the sensor. This level is determined by the placement height of the sensor in the bin.

BIN LEVEL SENSOR-INSTALLATION

To start the Bin Level Sensor installation, locate and center punch a spot on the BACK side of the seed bin, approximately 1 inch below the inside cross-member. Drill a 3/4 inch hole for the sensor cable to feed through.

NOTE: Make sure the seed bin cross-member located on the inside of the bin is not in the way of the hole.

On year 2000 models of the 5824 and 4836 seeder carts the holes for mounting the bin level sensor mounting bracket are pre-drilled into the bin cross member. On earlier models use the bin sensor bracket and use it as a guide to mark two places on the cross member; Bottom inside of the seed bin (see photos 3128 & J103). Center punch and drill both holes with a 9/32 inch drill.

Use the 1/4-20 x 3/4 hexhead cap screws and 1/4-20 Whizlok nuts and bolt the bracke to the frame cross-member. Use the #10-32 x 1/2 inch roundhead screws, #10 split washers, and #10-32 hex nuts to secure the bin level sensor to the bracket.

The bin level sensor was changed in 1999. The first version mounted horizontally as shown in photo 3128. The new version mounts vertically as shown in photo J103.

Multiple holes are provided for bin alarm set-point adjustment.

Route the bin level sensor cable through the hole previously drilled in the seed bin wall and move the grommet down the cable. Inset the grommet in the drilled hole to seal it.

Cable tie the bin level sensor cable to the underside of the cross-member to prevent unwanted movement.

Connect the sensor cable to 10' or 20' bin level extension cables and route up to the 5815 console mounted in the tractor cab. Connect to the console pigtail marked bin level. Secure all wiring using proper length wire ties.

NOTE: Allow room at hitch for proper turning.

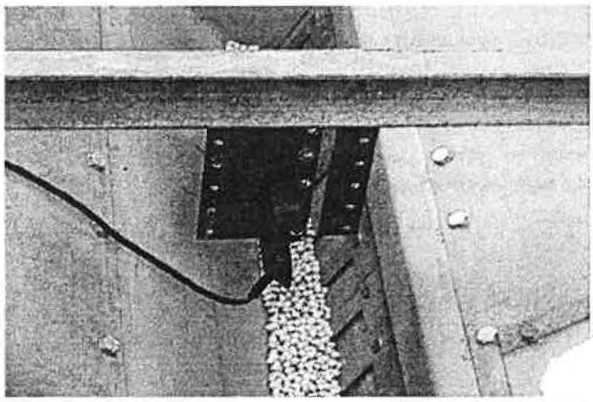


PHOTO NO. J103

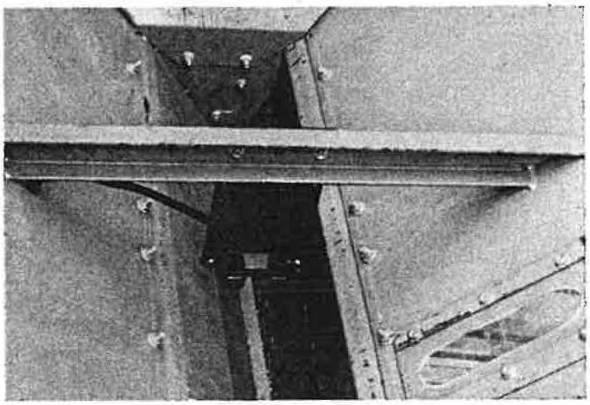


PHOTO NO. 3128

BLOCKED SEED TUBE DETECTOR WITH DUAL CLUTCH MACHINES

Install the Dual Clutch Box bracket in a convenient location. Mount the Blocked Seed Tube Detector to the Dual Clutch Box using the two mounting plates and hardware as shown in figure 1.

Connect the cables marked Power to the proper consoles, then route to the battery and connect as shown in figure 2.

Connect the Adapter cable to the proper connections on the Dual Clutch Box and the Blocked Seed Tube Detector as shown in figure 2. There is no connection to the cable maked Clutch on the Blocked Seed Tube Detector. Connect the wto 20 foot Seed Sensor Cables to the Left and Right bank of sensors at the center of the Seeder as shown in figure 2. the 1 foot Jumper cable between the Left and Right Sensor bank in not used. Route these cables to the hitch, connect to the 10 foot Seed Sensor cables, and continue to route to the Console area. Connect these cables to the adapter ends marked Left and Right.

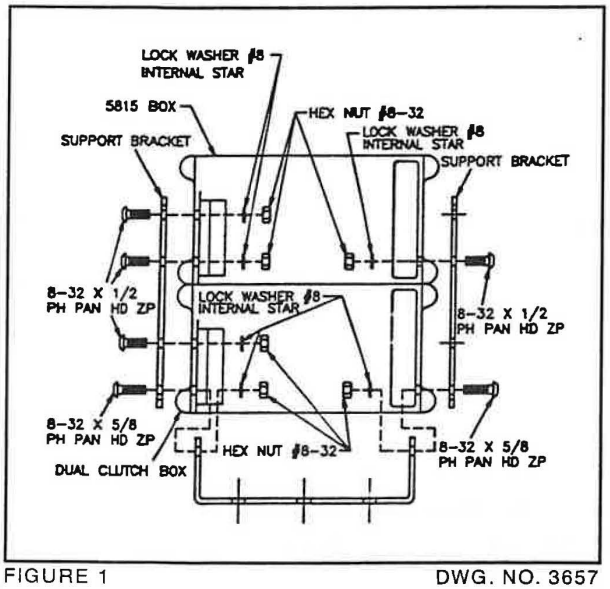


FIGURE 1 DWG. NO. 3657

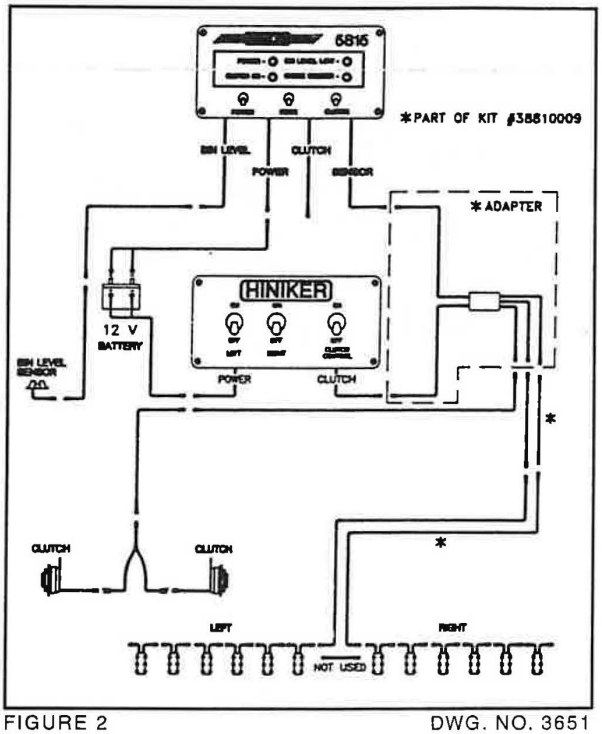


FIGURE 2 DWG. NO. 3651

OPERATION

Refer to the 5815 Operators manual for a description of the various funcitons of the Blocked Seed Tube Detector. For use with dual clutch machines the Clutch switch on the blocked Seed Tube Detector will be let in the **on** position and **not** used. Clutch control will be accomplihed using the Dual Clutch Box. Use the master Clutch switch to turn the clutches on and off. The Left and Right switches will disable the **sensors** and **clutch** for the side that is turned off. This will allow the remaining side to operate normally.

NOTE: If a Warning error occurs when shutting off the Left or Right switches, reset by switching the Master clutch switch off then back on.

SEEDER DRIVE WHEEL LIFT

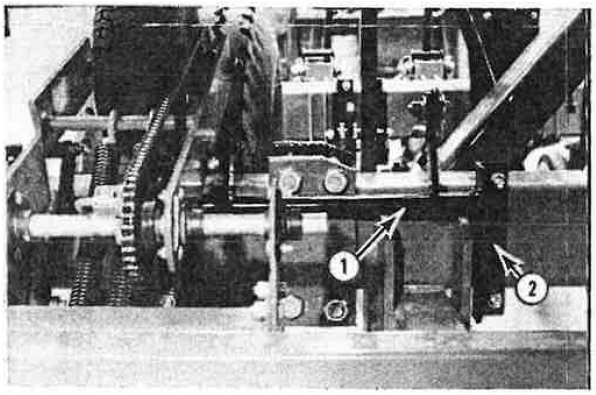
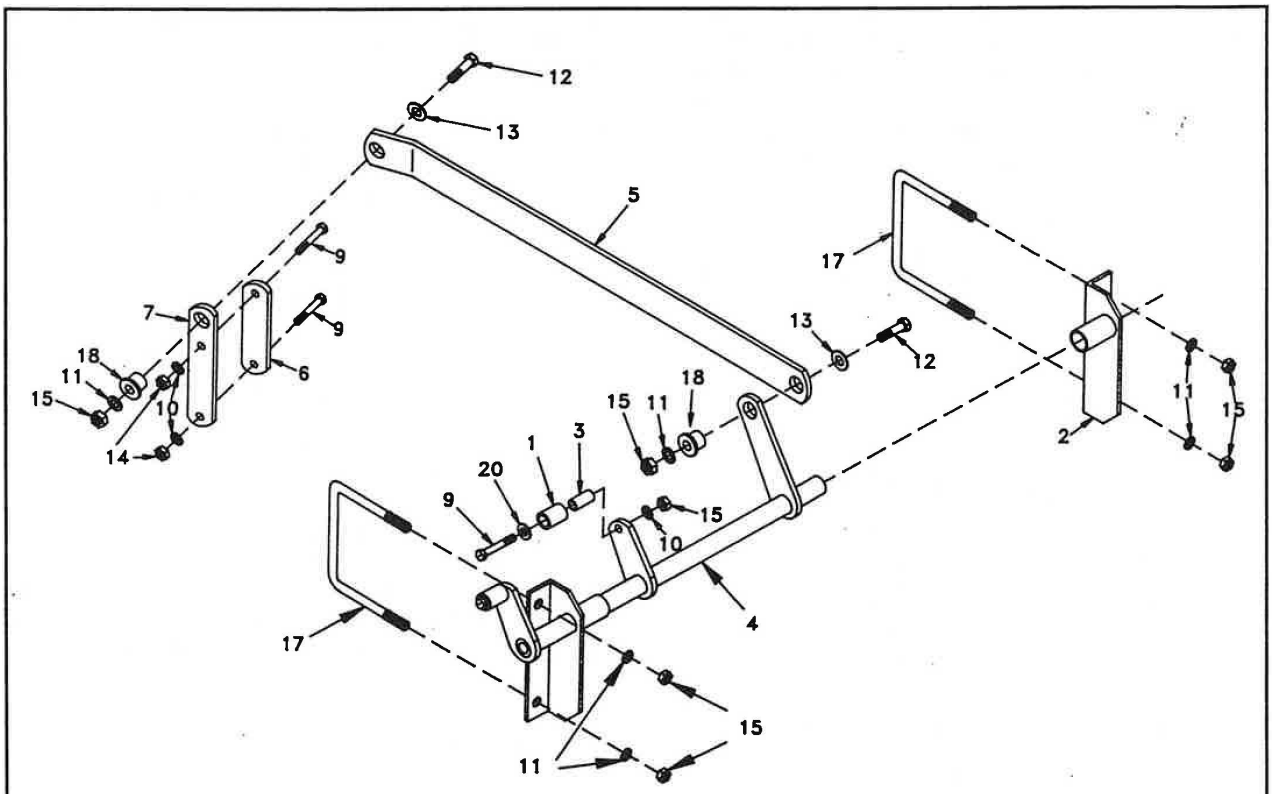


PHOTO NO. 4150

Install lift lever weld (arrow 1) and left hand angle weld (arrow 2) on the front side of this trailer 5 x 7 tube.

Complete the assembly by using the drawing below.

Make adjustment to where lift as shown on page 49.



DWG. NO. 4012

REF NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	80305676	Outer Roller	2	11	952-001-005	Lockwasher 5/8	6
2	80305672	LH Angle Weld	1	12	950-001-023	HHCS 5/8-11NC x 2 Lg. Gr. 5	2
3	80305683	Inner Space	2	13	952-002-007	Flat Washer 5/8	2
4	80305679	Lift Lever Weld	1	14	951-001-007	Hex Nut 1/2-13NC	4
5	80305675	Push Lever	1	15	951-001-008	Hex Nut 5/8-11NC	6
6	80305678	Clamp Plate	1	16	80305677	Instruction Sheet	1
7	80305669	Lift Strap	1	17	81003020	U-Bolt 5/8 x 7 5/8	2
8	900-001-065	Carton 10 x 11 x 43	1	18	80504335	Flange Bushing	2
9	950-001-159	HHCS 1/2-13NC x 2 1/2 Lg. Gr. 5	4	19	902-001-001	Plastic Bag 6 x 12	1
10	952-001-004	Lockwasher 1/2	4	20	952-002-005	Flat Washer 1/2	2

SEEDER DRIVE WHEEL LIFT ADJUSTMENT

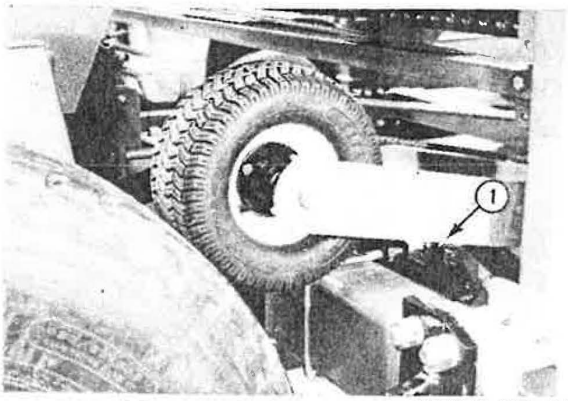


PHOTO NO. 4140

When trailer toolbar lift arm is down and seeder is in the working position, the seeder drive wheel will be pressing against large trailer tire. The lift rollers (arrow 1) must be free of drive wheel side bars.

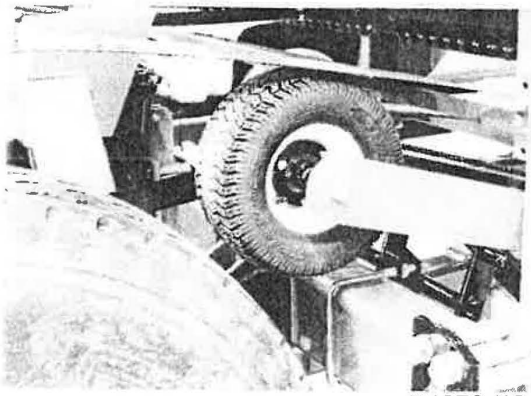
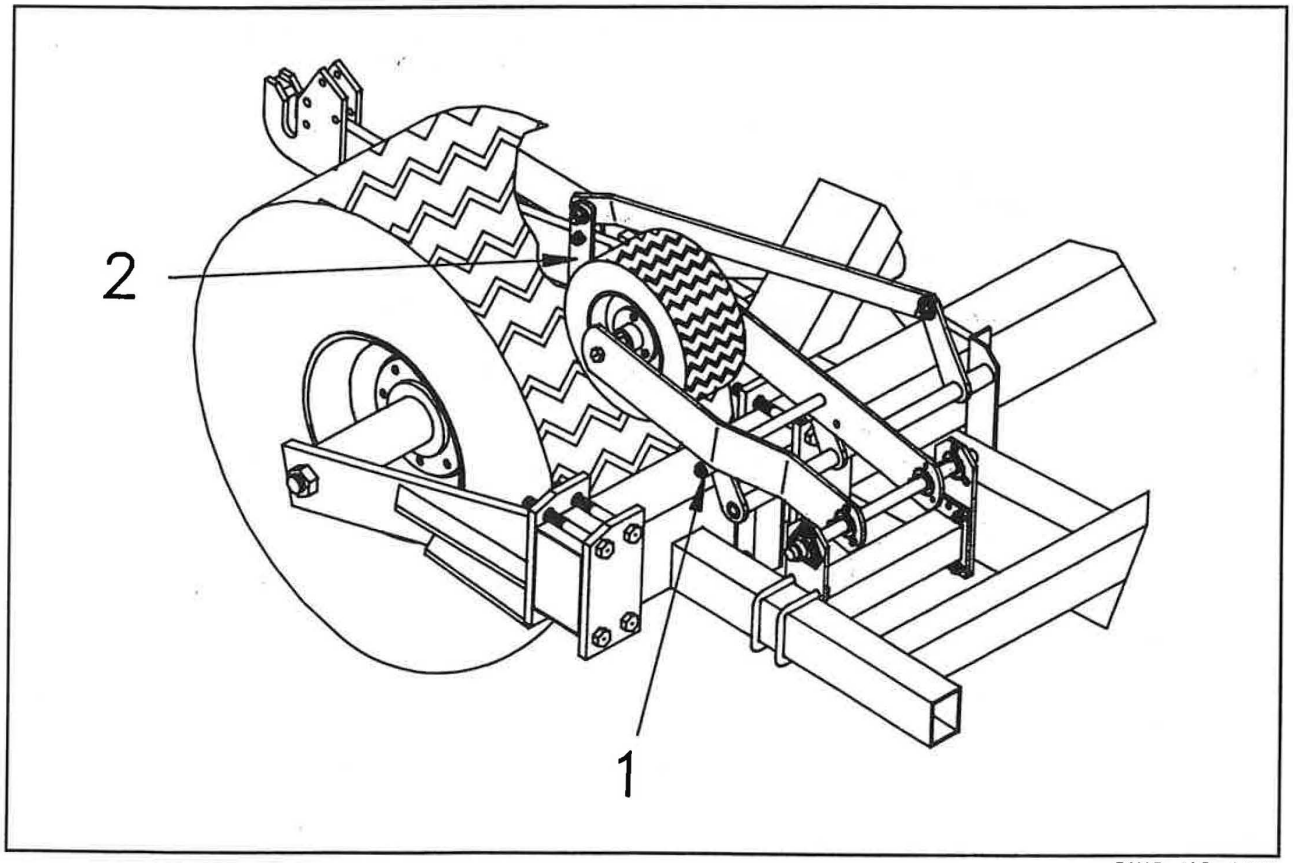


PHOTO NO. 4141

When the seeder drive wheel lift is used, the trailer toolbar lift arm will push link forward and it will lift dirve wheel off large trailer tire and seeder will automatically stop seeding.



DWG. NO. 4008

Adjustment to lift roller (arrow 1) can be made by moving lift bar anchor (arrow 2) foreward and rearward. Proper adjustment will be made by first, estabilish working height of seeder toolbar in the seeding position. At that time lift rollers (arrow 1) must be free, of drive wheel side bars.

SEED TANK AGITATOR

STEP 1

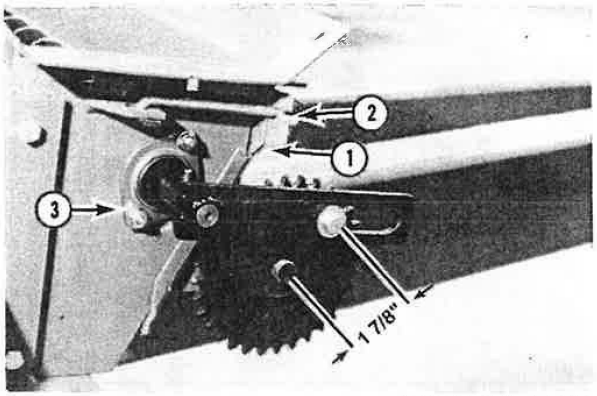
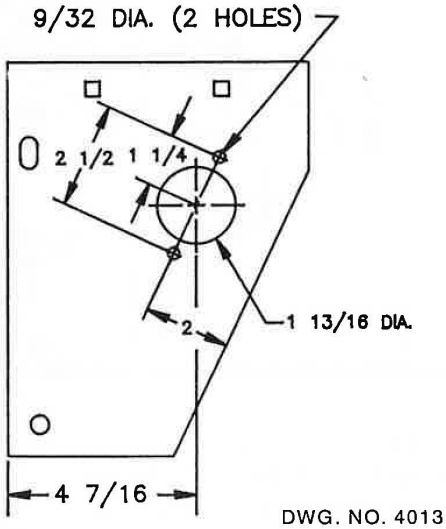


PHOTO NO. 4144A

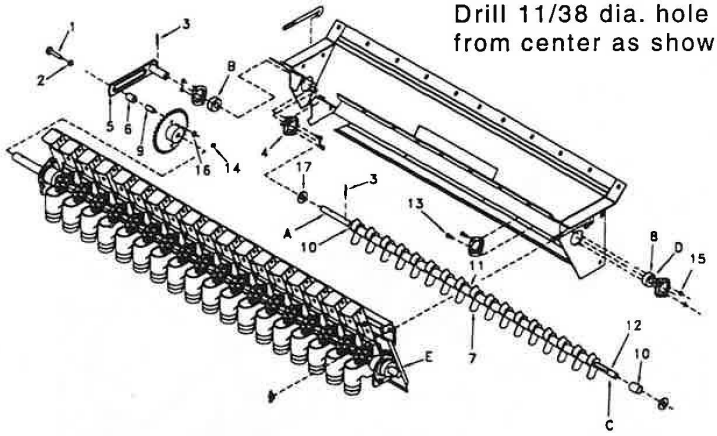
Remove side hopper drive chain, and seed metering assembly (arrow 1). By unbolting four J-bolts (arrow 2) remove four side covers (arrow 3) on production 2001 and later.
NOTE: The two lower seed metering support weldment do not need be removed.

STEP 2



DWG. NO. 4013

Earlier 4836 models can be fit with agitator by drillings four sets of hoes as shown above. Drill 11/38 dia. hole in sprocket at 1 7/8 inch from center as shown in photo at left.



DWG. NO. 4007

REF. NO.	PART NUMBER	DESCRIPTION	QTY.	REF. NO.	PART NUMBER	DESCRIPTION	QTY.
1	031-06059	HHCS 5/16 UNC x 2 Gr. 5	2	10	80305661	End Spacer	4
2	033-122007	Washer SAE Falt 5/16 PL	2	11	80305662	Middle Spacer	34
3	953-003-027	Spring Pin	4	12	80305663	Hex Shaft	2
4	80302057	Flangette	8	13	950-001-233	HHCS 1/2-20 x 5/8 Gr. 5	8
5	80305654	Lever Weld	2	14	951-001-004	Nut-Hex 5/16-18	2
6	80305655	Roller	2	15	951-002-001	Nut-FL WZLK 1/4-20	8
7	80305657	Seed Agitator Plate	72	16	952-001-002	Washer-LK 5/16 Med Split SAE	2
8	80305659	Bearing	4	17	952-003-003	Washer-flat 5/8 SAE	2
9	80305660	Spacer	2				

STEP 3

Install bearings (arrow 8) and flangette (arrow 4) into sideplate using fastener provided. Assembly agitator, plates (arrow 7) and middle spacer (arrow 11) and two end spacers (arrow 10) onto hex. shaft (arrow 12). Install spring pin (arrow 3) in long round end of hex shaft.

STEP 4

With agitator assembly together install 5/8 flat washer (arrow 17) then slide long round end of hex. shaft (arrow A) into bearing (arrow B) then end (arrow C) into bearing (arrow D). Reinstall seed meter ing assembly (arrow E). Then lever weld (arrow 5) with roller.

HINIKER SERVICE LITERATURE

A. PARTS CATALOG - P/N 80305579

4830 parts book is available from your Hiniker dealer. It lists service parts for your machine with exploded illustrations to help you identify the correct parts. It is also helpful in assembling and disassembling.

B. OPERATORS MANUAL - P/N 80504784

The operators manual provides safety, operating, maintenance and service information about Hiniker 4831, 4832, 4833 Airdrill.

C. ASSEMBLY MANUAL - P/N 80504785

Contains set up instructions for the Hiniker 4836 Air Seeder Cart and the options available for it.

CONTACT YOUR HINIKER DEALER OR CONTACT:

HINIKER COMPANY
58766 240th St.
PO BOX 3407
MANKATO, MN 56002-3407

Telephone: (507) 625-6621
Fax: (507) 625-5883

APPENDIX B

DAKOTAH SALES

MANUFACTURER'S REPRESENTATIVES

MARK S. SWENSON
1918 Shanard Road • Mitchell, SD 57301
Ph: 605-996-7520 • Fax: 605-996-1608

Customer's Order No. _____ Date 9-26-00

Name PUTHOFF REPAIR

Address _____

SALEM, SD Phone 425-2018

SOLD BY	CASH	C.O.D.	CHARGE	ON ACCT.	MDSE. RET'D	PAID OUT
Mark			✓			Blazon 2000

QUAN.	DESCRIPTION	PRICE	AMOUNT
4	4883 Hurdler seeder		
3	80305586 40' row Markers		
4	80305512 weight bracket		
1	80305509 Auger Not Kit		
32	80305587 Soil Deflectors		
152	810-001-176 Ballast Rock		
10	4802 Row units		
	All returns and/or Parts Credits MUST be accompanied by this Bill	TAX	
	Received By _____	TOTAL	

Thank You

HINKEL COMPANY

IMPORTANT: Shaded areas must be completed on ALL orders. Complete other areas as required. 44657

Customer Number | Warehouse Number

SOLD TO:
Name Pathoff Repair
Address
Address
City State Zip Code

SHIP TO:
Name
Address
Address
City State Zip Code

Order Date
Date Required
Cust. P.O. No.

Credit Approval:

Ship Via Ltruck
Taken By

F.O.B.

Salesman Number

Payment Terms
Trade Discount Additional Discount

ITEM NUMBER	AVAIL	DESCRIPTION	LOCATION	QUANTITY	UNIT PRICE	TOTAL AMOUNT
# 4833				1		
80305586				1		
80305572				1		
80305587				16		
810-001-176				38		

Internal Comments (Pick Slip Only) 4-5

Comments (Invoice & Pick Slip)

Acknowledgement required: Yes ☐

Customer Signature

FN 750

APPENDIX C

HINIKER COMPANY

P.O. BOX 3407
MANKATO, MINNESOTA 56002-3407
TELEPHONE (507) 625-6621

HINIKER®

Please refer to invoice number when making payment.

INVOICE	PAGE
353054	1

DATE
1/31/01

CURRENCY

SHIP TO
PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM SD 57058-0490

SOLD TO
PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM SD 57058-0490

Title to all merchandise listed below remains in Hiniker Company until the date when total invoice is paid in full. A late payment charge not exceeding 1% monthly (12% annual) may be added on past due balance. Minimum charge $.50.

FILE

TERMS
NET DUE JUNE 10, 2001.

SELLER TAX I.D.

CUSTOMER	ORDER	SLS. REP.	PURCHASE ORDER NUMBER	P.O. REV.
1 71020500	CO 441657	LB		

SHIP NO.	SHIP VIA	SHIP DATE
1	HINIKER TRUCK	1/31/01

LINE NO.	ITEM NUMBER / DESCRIPTION	U/M	QUANTITY / PRICE	NET SALES AMOUNT
	ALSO ELIGIBLE FOR A 5 % EARLY ORDER DISCOUNT IF PAID BY DUE DATE. 4% FEB. 10, 3% MAR. 10, 2% APR. 10, NET DUE JUNE 10, 2001.			
	4837	EA	1.000	
	120 BU SEED CART W/40' TLB/32		34,721.610	34,721.61
	SERIAL NUMBER:	4836-1086-104		
	80305536	EA	1.000	
	40' MARKER ASSY		2,062.060	2,062.06
	80305912	EA	1.000	
	WEIGHT BRACKET COMPONENTS		207.900	207.90
	80305587	EA	10.000	
	PAIR OF PSL SCRAPER ASSY		19.290	308.70
	810-001-176	EA	30.000	
	CONCRETE BLOCK		2.310	57.76
	NO TAXES			.00

NET SALES	37,307.35		.00
MISC. CHARGES	.00	TERMS DISCOUNT	.00

HINIKER COMPANY
P.O. BOX 3407
MANKATO, MN 56002-3407

ORIGINAL

WAREHOUSE: 1
TAKEN BY: LOK

CUST. ORDER #: 441657
PICK LIST #: 37258

ORDER DATE / TIME: 10/02/00 14:43:3

SOLD TO:

PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

PHONE: 605-425-2018

SHIP TO:

PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

PHONE: 605-425-2018

SHIP'D JAN 30 2001 TK23

CUST. NO.	REQ. DATE	SHIPPING INSTRUCTIONS	CARRIER	TERR.	CUSTOMER P.O.
71036600	10/02/00	HINIKER TRUCK		04	

ITEM NUMBER / DESCRIPTION	NET PRICE / EXTENDED	M L I	LOCATION / QTY	PICK QTY.	SHIP QTY.	B.O. QTY.	REC'D
ALSO ELIGIBLE FOR A 5 % EARLY ORDER DISCOUNT IF PAID BY DUE DATE. 8% OCT. 10, 7% NOV. 10, 6% DEC. 10, 5% JAN. 10, 4% FEB. 10, 3% MAR. 10, 2% APR. 10, NET DUE JUNE 10, 2001.							
4833 M709690 TK23 130 BU SEED CART W/40' TLB/32		M		1			
SERIAL NO: 4836-0085-104							
** CONSISTS OF: **							
4802 DISC OPENER 2 ROW UNIT		M	SHW24 12 WW10A 200	16	16		
80302212 SEED TUBE 12 ROW 500 FT		M	SHW24 1 4A40C 5 4C37C 4 4C38C 5	1	1		
80305410 FRONT REST WELD		M	WB07A 5 WB07B 4	1	1		
80305507 HOSE BUNDLE 40' TOOLBAR		M	4A53A 4 4C63C 5	1	1		
80305508 FITTING BAG		M	SHW24 1 2C47F 12	1	1		
80504625 LH WHEEL LIFT ASSY		M	SHW24 1 WGUNIT 13	1	1		
80504626 RH WHEEL LIFT ASSY		M	SHW24	1	1		

TERMS		MERCHANDISE TOTAL	LESS C.D.	MERCHANDISE NET

HINIKER COMPANY
P.O. BOX 3407
MANKATO, MN 56002-3407

ORIGINAL

WAREHOUSE: 1
TAKEN BY: LDK

CUST. ORDER #: 441657
PICK LIST #: 77266

ORDER DATE / TIME: 10/02/00 14:43:

SOLD TO:

PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

PHONE: 605-425-2018

SHIP TO:

PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

PHONE: 605-425-2018

CUST. NO.	REQ. DATE	SHIPPING INSTRUCTIONS	CARRIER	TERR.	CUSTOMER P.O.
71036600	10/02/00	HINIKER TRUCK		04	

ITEM NUMBER / DESCRIPTION	NET PRICE / EXTENDED	M L I	LOCATION / QTY	PICK QTY.	SHIP QTY.	B.O. QTY.	REC'D
			WSUNIT 13				
-80504627 40' MISC BOLT BAG		M	2D34 6	1	1		
			3B65D 1				
-80504643 40 FT TOOLBAR WING ASSY		M	NAD03A 9	1	1		
			WN01A 1				
-80504719 CENTER TOOLBAR ASSY		M	SHW24 1	1	1		
			WN02A 13				
-80504741 4800 AIR DRILL TANK & TRAILER		M	SHW24 1	1	1		
			WJ01A 2				
✓ 80305586 M709700 40' MARKER ASSY	TK23	M		1			
** CONSISTS OF: ** -80504745 30' & 40' MARKER ASSY		M	NAC01A 3	1	1		
			NAC03A 3				
			SHW24 1				
-80504746 40' MARKER HOSE BDLE		M	~~4846B~~ 11	1	1		
80305512 WEIGHT BRACKET COMPONENTS	TK23	M	~~5D67B~~ 5	1	1		
			~~5D11A~~ 9				
80305587 PAIR OF R&L SCRAPER ASSY	TK23	M	SHW24 12	16	16		
			~~1G20A~~ 55				
810-001-176 CONCRETE BLOCK	TK23	M	~~BLOCK~~ 426	38	38		

TERMS		MERCHANDISE TOTAL	LESS C.D.	MERCHANDISE NET
NET DUE JUNE 10, 2001.	~~CASH~~			

13190

HINIKER COMPANY
P.O. BOX 3407
MANKATO, MN 56002-3407

ORIGINAL

PAGE: 2
WAREHOUSE: 1
CUST. ORDER #: 441657
TAKEN BY: LOK
PICK LIST #: 37255

ORDER DATE / TIME: 10/02/00 [illegible]

SOLD TO:
PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

PHONE: 605-425-2018

SHIP TO:
PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

45966

PHONE: 605-425-2018

CUST. NO.	REQ. DATE	SHIPPING INSTRUCTIONS	CARRIER	TERR.	CUSTOMER P.O.
71036600	10/02/00	HINIKER TRUCK		05	

ITEM NUMBER / DESCRIPTION	NET PRICE / EXTENDED	M L I	LOCATION / QTY	PICK QTY.	SHIP QTY.	B.O. QTY.	REC'D Q
80504627 40' MISC BOLT BAG		M		1	1		✓
80504643 40 FT TOOLBAR WING ASSY		M		1	1		1
80504719 CENTER TOOLBAR ASSY		M		1	1		1
80504741 4800 AIR DRILL TANK & TRAILER		M		1	1		1
80305806 M709700 40' MARKER ASSY		M		1			
** CONSISTS OF: ** 80504745 30' & 40' MARKER ASSY		M		1	1		1
80504746 40' MARKER HOSE BOLE		M		1	1		✓
80305812 WEIGHT BRACKET COMPONENTS		M		1	1		1
80305687 PAIR OF R&L SCRAPER ASSY		M		16	16		✓
910-001-178 CONCRETE BLOCK		M		38	38		✓

Nadine Isern
1-31-01

TERMS		MERCHANDISE TOTAL	LESS C.D.	MERCHANDISE NET

HINIKER

HINIKER COMPANY
P.O. BOX 3407
MANKATO, MN 56002-3407

ORIGINAL

WAREHOUSE: I
TAKEN BY: LDK

PAGE: 1
CUST. ORDER #: 441657
PICK LIST #: 37256

ORDER DATE / TIME: 10/02/00 14:43:31

SOLD TO:

PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

PHONE: 605-425-2018

SHIP TO:

PUTHOFF REPAIR SALES & SERVICE
200 EAST RUTAN AVENUE
P.O. BOX 490
SALEM, SD 57058-0490 USA

858064

PHONE: 605-425-2018

CUST. NO.	REQ. DATE	SHIPPING INSTRUCTIONS	CARRIER	TERR.	CUSTOMER P.O.
71039600	10/02/00	HINIKER TRUCK		04	.

ITEM NUMBER / DESCRIPTION	NET PRICE / EXTENDED	M L I	LOCATION / QTY	PICK QTY.	SHIP QTY.	B.O. QTY.	REC'D Q
ALSO ELIGIBLE FOR A 5 % EARLY ORDER DISCOUNT IF PAID BY DUE DATE. 8% OCT. 10, 7% NOV. 10, 6% DEC. 10, 5% JAN. 10, 4% FEB. 10, 3% MAR. 10, 2% APR. 10. NET DUE JUNE 10, 2001.							
4833 M709690 130 BU SEED CART W/40 FLUTE 32				1			
SERIAL NO: 4536 - 1089 - 1/4							
** CONSISTS OF: **							
4802 DISC OPENER 2 ROW UNIT				16	16		16
80302212 SEED TUBE 12 ROW 500 FT				1	1		1
80305410 FRONT REST WELD				1	1		1
80305507 HOSE BUNDLE 40' TOOLBAR				1	1		✓
80305508 FITTING BAG				1	1		✓
80504625 LH WHEEL LIFT ASSY				1	1		1
80504626			SHW24	1			1

Nadine Isaac
1-31-01

TERMS		MERCHANDISE TOTAL	LESS C.D.	MERCHANDISE NET