

## **2700 ALL-TILL CULTIVATOR**

*4-Thru 16-Row Models*

**OPERATORS MANUAL  
SETUP AND PARTS BOOK**

**WETHERELL MFG. CO.**

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## INTRODUCTION

Congratulations, you are now the owner of a Wetherell Cultivator. In the following pages, we have pointed out **WARRANTY, SAFETY RULES, TRACTOR PREPERATION, PARTS BREAKDOWN, AND GENERAL** "Common Sense" suggestions for you to study carefully!

We do feel that you will have the best results with your cultivator, if you follow our instructions and suggestions.

Thank you for choosing a Wetherell Cultivator.

Ronald Wetherell

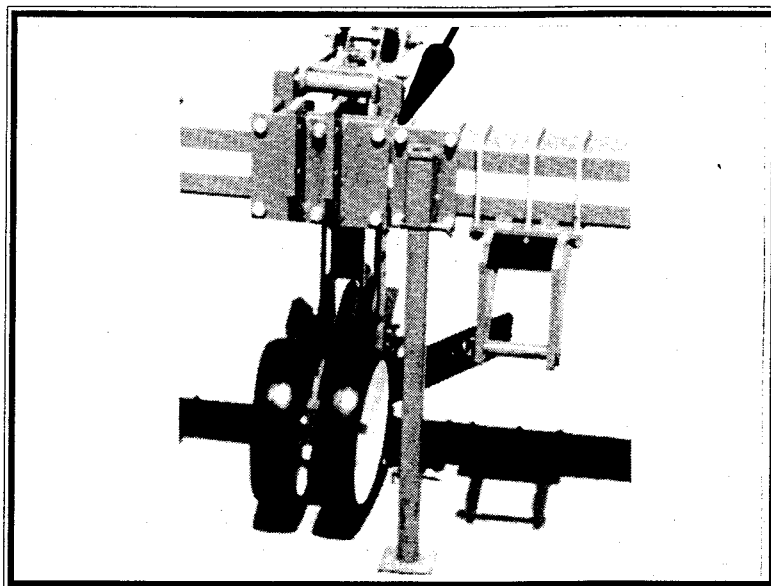
## SERIAL NUMBER LOCATION

Always give your dealer the model number and serial number of the machine when ordering parts or requesting service information.

The serial Number is located on the left side of the mast (shown below) and is stamped in the metal on the toolbar.

**MODEL NUMBER** \_\_\_\_\_

**SERIAL NUMBER** \_\_\_\_\_



# CONTENTS

Forward	1.1
Safety Rules	1.2
<b>PREPARING THE TRACTOR</b>	
Tractor Wheel Spacing - Adjusting Lift Links - Positioning Sway Blocks - Drawbar	2.1
Cultivator Weights - Cultivator Options	2.2
<b>PREPARING THE CULTIVATOR</b>	
Leveling Cultivator Frame - Toolbar Height	3.1
Setting Cultivator Depth	3.2
Cultivator 3-Point Hitch Part No.	3.3
Setting 3-Point Hitch	3.4
3-Point Hitch Ass'y (4-Thru 8-Row)	3.5
3-Point Hitch Ass'y (12-Thru 16-Row)	3.6
<b>TROUBLESHOOTING</b>	4.1
<b>STORAGE</b>	5.1
<b>ASSEMBLY (General)</b>	6.1
Bolt Torque Chart & Decal Identification & Placement	6.2
<b>ROW SPACINGS &amp; ATTACHMENT SPACING DIAGRAMS</b>	
4-6-8 Row 2700 All-Till ( <i>Non-Folding</i> ) - 8-Row 2700 All-Till ( <i>Hyd. Fold</i> )	7.1
12-Row 2700 All-Till ( <i>Hyd. Fold</i> ) - 16-Row 2700 All-Till ( <i>Hyd. Fold</i> )	7.2
<b>PARTS MANUAL</b>	
3-Point Hitch (4&8-Row)	3.5
3-Point Hitch (12-Thru 16-Row)	3.6
Hydraulic Fold Hinge Ass'y (8-thru 16-row)	8.1, 8.2
Gang Mainframe Ass'y	8.3, 8.4
Gang ( <i>Spring Trip &amp; Shank</i> )	8.5, 8.6
Gang gauge wheel ass'y	8.7
Toolbar Gauge Wheel Ass'y	8.8
<b>OPTIONAL EQUIPMENT</b>	
Wetherell Lift Assist	8.9, 9.0
Cut Away Disc (Hillers)	9.1
NH3 Hitch	9.2
48" Open Top Shields	9.3
Hydra-Power Top Link Cyl.	9.4
Deluxe Ridge Builders	9.5, 9.6

## FOREWORD

**READ THIS MANUAL CAREFULLY** to learn how to assemble, and service your Wetherell Cultivator properly. Failure to do so could result in personal injury or equipment damage.

**THIS MANUAL SHOULD BE CONSIDERED** a permanent part of your Wetherell Cultivator and should remain with the machine when you sell it.

**MEASUREMENTS** in this manual are U.S. customary units.

**RIGHT HAND AND LEFT HAND SIDES** are determined by standing behind cultivator and facing the direction the Wetherell Cultivator will travel when going forward.

**THE FRONT SECTION** of this manual contains safety assembly, operation and service instruction's for Wetherell Cultivators. The rear section contains a list of parts available for service and repair.

**WRITE PRODUCT IDENTIFICATION NUMBERS** in the serial number location section, located in the front of the manual. An accurate record of these numbers will help in tracing your machine, should it be stolen. Your dealer also needs these numbers when you order parts. If this manual is kept on the machine, also file a copy of the identification numbers in a secure place off the machine.

**WARRANTY** is provided as part of Wetherell Manufacturing Company's support program for customers who operate and maintain their equipment as described in this manual. All Wetherell Manufacturing Company parts and workmanship will be free of defect for the first crop season. All warranty claims must be processed by **DECEMBER 31 OF THAT SEASON**. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void. Additionally, Wetherell Manufacturing Company's Warranty does not cover labor or expense involved. This concludes any and all warranties implied in the manufacture, unless otherwise stated in writing.

## SAFETY



**RECOGNIZE SAFETY INFORMATION.** This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

**FOLLOW RECOMMENDED PRECAUTIONS** and safe operating practices.

**FOLLOW SAFETY INSTRUCTION.** Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs.



**DANGER**

**LEARN HOW TO OPERATE** the machine and how to use the controls properly. Do not let anyone operate without instruction. Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.



**WARNING**

**UNDERSTAND SIGNAL WORDS.** A signal word—**DANGER, WARNING** or **CAUTION**- is used with the safety-alert symbol. **DANGER** identified the most serious hazards. Safety signs with the signal words **DANGER OR WARNING** are typically near specific hazards. General precautions are listed on **CAUTIONS** safety signs. **CAUTION** Also calls attention to safety messages in this manual.



**CAUTION**

## SAFETY RULES

- Although we make every effort to insure maximum safety when using a Wetherell Cultivator, a careful operator is always the best assurance against an accident.
- When working under or around the cultivator, always lower cultivator down on parking stands, if a hydraulic failure were to occur, unsupported equipment could suddenly lower causing serious personal injury or death.
- Misuse or modification of this machine can cause a mechanical breakdown, property damage or personal injury or death.
- Stop the engine as well as any other power source and set parking brake before making any adjustments, lubricating, cleaning or unclogging cultivator.
- Before hitching a Wetherell Cultivator to the tractor 3-point hitch, check this manual for cultivator weight, and any other weight (attachments) to be carried by the tractor 3-point hitch for gross weight. Now refer to the tractor owners manual to determine if the tractor and 3-point hitch have enough capacity for the weight or will you need front end weights or a larger tractor.
- All New Wetherell Cultivators (as of Jan. 1993) are equipped with 1" dia. pins, used to lock cultivator wings down when cultivating. Make sure these pins are REMOVED and placed in pin carrier at the bottom of the wing toolbar, when raising or lowering the wings to prevent damage to the machine or personal injury.
- Keep all persons clear of the cultivator when raising or lowering the wings.
  
- Do not allow anyone to ride on the cultivator, rider is subject to injury and may obstruct the operators view.
- Operate the cultivator from the tractor seat only.
  
- No one other than the operator should ride on the tractor.
  
- Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid can infect cuts or minor skin openings. Should you be injured by escaping hydraulic fluid seek medical attention immediately. Relieve all pressure before disconnecting hydraulic hoses or working on hydraulic cylinders.
- Use extreme care when operating close to ditches, fences or on hillsides.
  
- Shift tractor into a lower gear when transporting down hills and steep slopes.
  
- Before unhitching cultivator from tractor make sure front parking stands are lowered and secured with lock pin.
- Comply with all state, federal and local laws when transporting down hills and steep slopes.
  
- Be sure a SMV emblem is visible from the rear when transporting the cultivator.
  
- Always place the cultivator in the transport position when transporting.
  
- Operate at a reasonable speed to maintain complete control at all times.

## PREPARING THE TRACTOR

### TRACTOR - STABILITY

### IMPORTANT !

- Refer to the cultivator weights page of this manual for the size and weight of the cultivator you are going to use. Also consider, the additional weight of: Toolbar gauge wheels, guide hitch, fertilizer attachments, herbicide and insecticide attachments, or any other devices that may be added to the gross cultivator weight to be raised by the tractors 3-point hitch.
- Refer to the tractor owners manual to determine if the tractor size is adequate for the weight of the cultivator and attachments you have selected. You may have to add front end ballast or lift assist wheels (possibly both) or perhaps the tractor is not large enough for the load. If you are having trouble determining the tractors stability, consult your tractor dealer for assistance.
- Drive tractor onto level surface, and make sure all tires are inflated to tire manufacture's recommended pressure.

### (A) TRACTOR WHEEL SPACING

Center to center of wheels should be the row width to be cultivated times 2. (Example: 38" rows x 2 = 76" centers). The wheel spacing of the tractor should be set as close to the center of the row as possible. If dual wheels are used, center the dual wheel, using the proper spacers.

### (B) ADJUST LIFT LINKS

To maximum length, tractor cab can be damaged if links are not adjusted properly.

### (C) FOR CULTIVATORS WITH GAUGE WHEELS

Set lift links to free or float position.

### FOR CULTIVATORS WITHOUT GAUGE WHEELS

Set lift links for rigid position.

### (D) POSITION SWAY BLOCKS

To wide setting (for least amount of clearance).

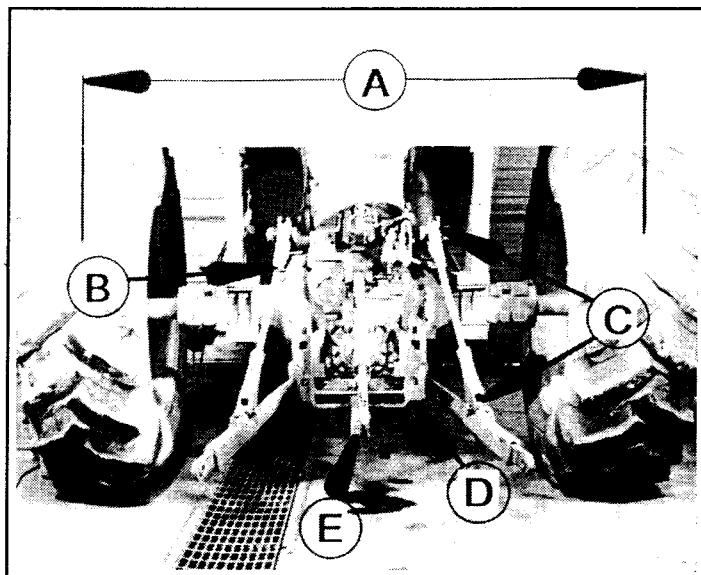
### (E) SLIDE DRAWBAR

To the extreme left or right of support, or remove drawbar.

NOTE: If the drawbar remains on center, it will interfere with center gang gauge wheels.

### CAUTION !

After cultivator has been mounted to tractor, check the front end stability of the tractor. Tractor front end stability is necessary for safe and efficient operation. It is important that the proper amount of weight be installed on the front of the tractor, as recommended in your tractor's operator's manual.



## CULTIVATOR WEIGHTS W/SWEEPS—ADD OPTIONS

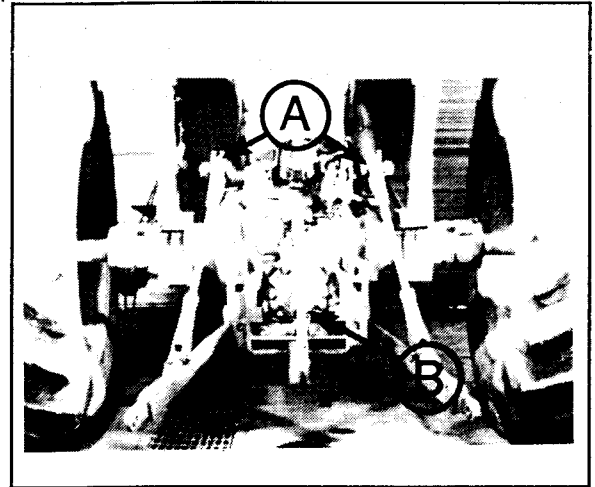
TYPE AND SIZE CULTIVATOR	MODEL	ITEM#	WEIGHT
2700 All-Till 4 - Row Wide <i>(Non - Fold)</i>	2700 - 4W	300-270100	2033 #
2700 All-Till 6 - Row Narrow <i>(Non - Fold)</i>	2700 - 6N	300-270110	2839 #
2700 All-Till 6 - Row Wide <i>(Non - Fold)</i>	2700 - 6W	300-270120	2949 #
2700 All-Till 8 - Row Narrow <i>(Non - Fold)</i>	2700 - 8N	300-270130	3660 #
2700 All-Till 8 - Row Wide <i>(Non - Fold)</i>	2700 - 8W	300-270135	4090 #
2700 All-Till 12 - Row Narrow <i>(Non - Fold)</i>	2700 - 12N	300-270165	5065 #
2700 All-Till 8 - Row Narrow <i>(Hyd. Flat Fold)</i>	2700 - 8N-FF	300-270140	4331 #
2700 All-Till 8 - Row Wide <i>(Hyd. Flat Fold)</i>	2700 - 8W-FF	300-270150	4451 #
2700 All-Till 12 - Row Narrow <i>(Hyd. Flat Fold)</i>	2700 - 12N-FF	300-270160	5912 #
2700 All-Till 16 - Row Narrow <i>(Hyd. Flat Fold)</i>	2700 - 16N-FF	300-270170	8293 #

OPTIONAL EQUIPMENT	ITEM #
Wetherell Lift Assist Bundle <i>(cylinder, hoses, and tires included) See page 10.0</i> <i>(note: 410 # each)</i>	300-700175
Wetherell 48" Open Top Shields <i>(mounting included) See page 10.3</i> <i>(note: 70 # per row)</i>	300-270320
Wetherell 48" Open top Shields(same shield w/poly strip on bottom) <i>See page 10.3</i> <i>(note: 71 # per row)</i>	300-270321
Large Gauge Wheel Kit w/15x4.5" rims <i>(pair) See pages 9.0, 9.1</i>	300-700180
590 x 15" or equiv. tire for above lg. gauge wheel kit	300-300230
Cut Away Disc (Hillers) <i>See page 10.1</i> <i>(note: 44 # per row)</i>	300-270490
Deluxe Ridge Builder <i>See page 10.5</i> <i>(note: 18 # per gang)</i>	300-270480
Two 48"Hyd. hoses and Pioneer Tips	300-300340
Telescoping NH3 Hitch <i>See page 10.2</i>	300-270510
Hydra-Power Top Link Cylinder <i>see page 10.4</i>	340-012635
Complete 2700 Gang (No point or plow lays)	300-270099
Westbar Ag Lighting Kit	300-800850

## PREPARING THE CULTIVATOR

### LEVELING CULTIVATOR FRAME

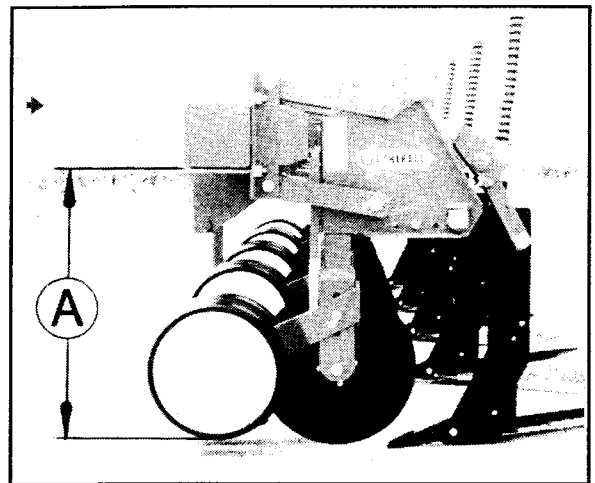
1. Adjust lift links (A) to level cultivator frame.
2. Adjust upper link (B) in or out until the front side of cultivator toolbar is perpendicular to the ground in field position.



### TOOLBAR HEIGHT

When front side of cultivator toolbar is perpendicular to ground in field position, dimension (A) should be as follows:

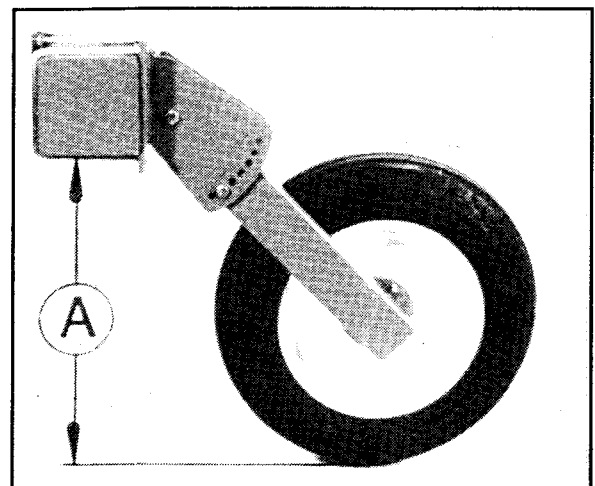
From the ground up to the bottom of the 7 x 7 toolbar DIM. (A)= 30" approx.



### TOOLBAR GAUGE WHEEL HEIGHT

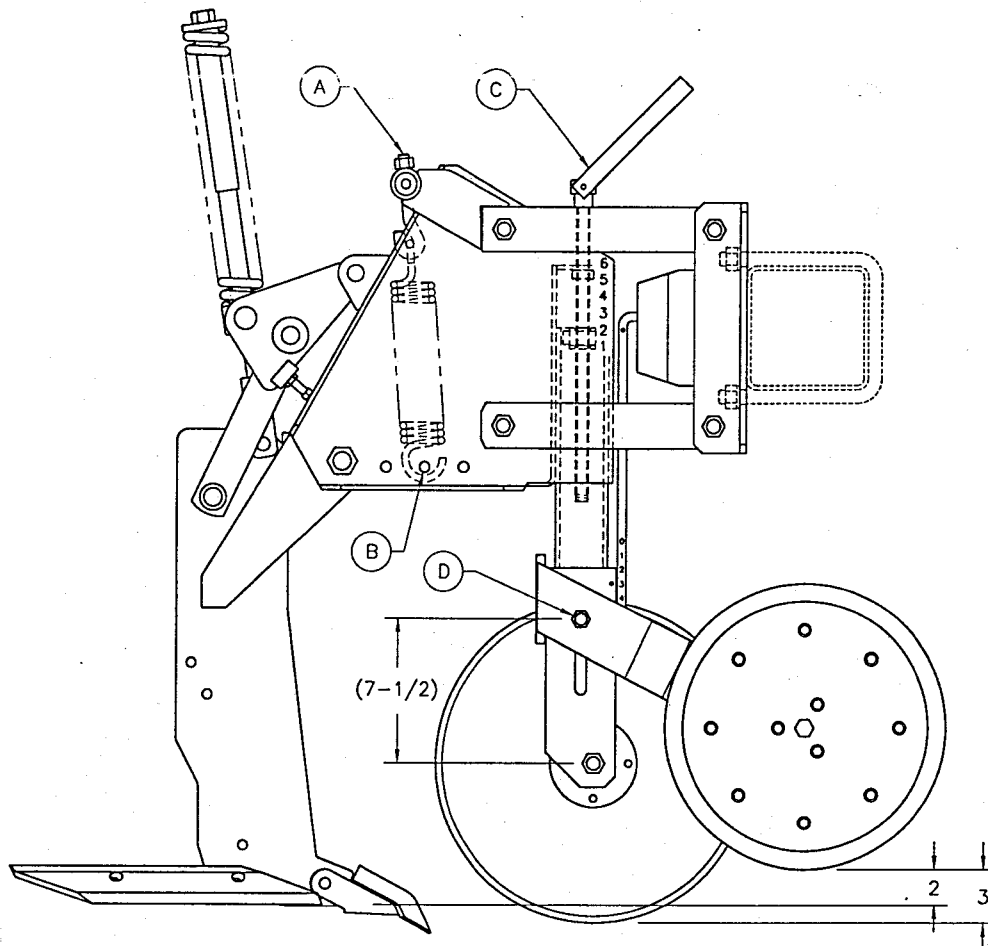
When front side of cultivator is perpendicular to ground in field position, DIM. (A) should be as follows:

From the ground up to the bottom of the 7 x 7 toolbar DIM. (A)= 30" approx.





## PREPARING THE CULTIVATOR



### Setting Gang Depth and Down Pressure

Shown in the Diagram above, is a Right Hand Side View of the 2700 All-Till Cultivator Gang.

**ADJUSTMENT (A)** Allows you to increase or decrease Down Pressure on the gang, by adjusting two 5/8"-N.C. hexnuts on the 5/8"-N.C. J-Bolt, connected to the Down Pressure Spring. *(Note: The hexnuts are set at the top of the J-bolt from the factory, and need to be adjusted according to your field conditions.)*

**ADJUSTMENT (B)** Allows you to move the bottom of the Down Pressure Spring, up to 3-hole adjustments forward, for yet more down pressure on the gang, should the couler and plow lays not penetrate the soil. *(Note: This adjustment is set in the center hole from the factory.)*

**ADJUSTMENT (C)** This adjustment is used to change the cultivating depth of the cultivator. By turning the handle clockwise it will increase the depth at the rate of six turns per inch of adjustment. It is set at 2" (indicated by the rule-type decal) and may need to be adjusted according to field conditions.

**ADJUSTMENT (D)** This adjustment sets the cutting depth of the couler. From the center of the couler to the center of bolt (D) is approx. 7 1/2". That sets the 18" Couler Blade at 3" indicated by the rule-type decal in the diagram above, and should only need to be adjusted as field conditions warrant. ***(Note: The initial Couler setting is recommended at 1" below the cultivating Depth).*** In the diagram above the couler depth which is 3" minus the 2" cultivating depth results in the recommended 1" setting below the cultivating depth.

## PREPARING CULTIVATOR 3-POINT

WETHERELL 2700 All-Till TYPE AND SIZE CULTIVATOR	MODEL NO.	REF.	3-POINT HITCH PART NO.
4-ROW WIDE (36-38") (NON-FOLDING)	27004W	A	302-14044
6-ROW NARROW (30") (NON-FOLDING)	27006N	A	302-14044
6-ROW WIDE (36-38") (NON-FOLDING)	27006W	A	302-14044
8-ROW NARROW (30") (NON-FOLDING)	27008N	A	302-14044
8-ROW WIDE (36-38") (NON-FOLDING)	27008W	A	302-14044
8-ROW NARROW (30") (HYDRAULIC FLAT FOLD)	2700-8N-FF	A	302-14044
8-ROW WIDE (36-38") (HYDRAULIC FLAT FOLD)	2700-8W-FF	A	302-14044
12-ROW NARROW (30") (HYDRAULIC FLAT FOLD)	2700-12N-FF	B	302-14045
12-ROW WIDE (36-38") (HYDRAULIC FLAT FOLD)	2700-12W-FF	B	302-14045
16-ROW NARROW (30") (HYDRAULIC FLAT FOLD)	2700-16N-FF	B	302-14045

# CAUTION !



Before attaching your **2700 All-Till CULTIVATOR** to your Tractor, Hitch Pins and Spacers must match your Tractor Hitch Configuration.

**IMPORTANT** - Tighten all Hitch, Mast Bolts and U-Bolts after 10 to 15 hours of Operation to the following Torque:

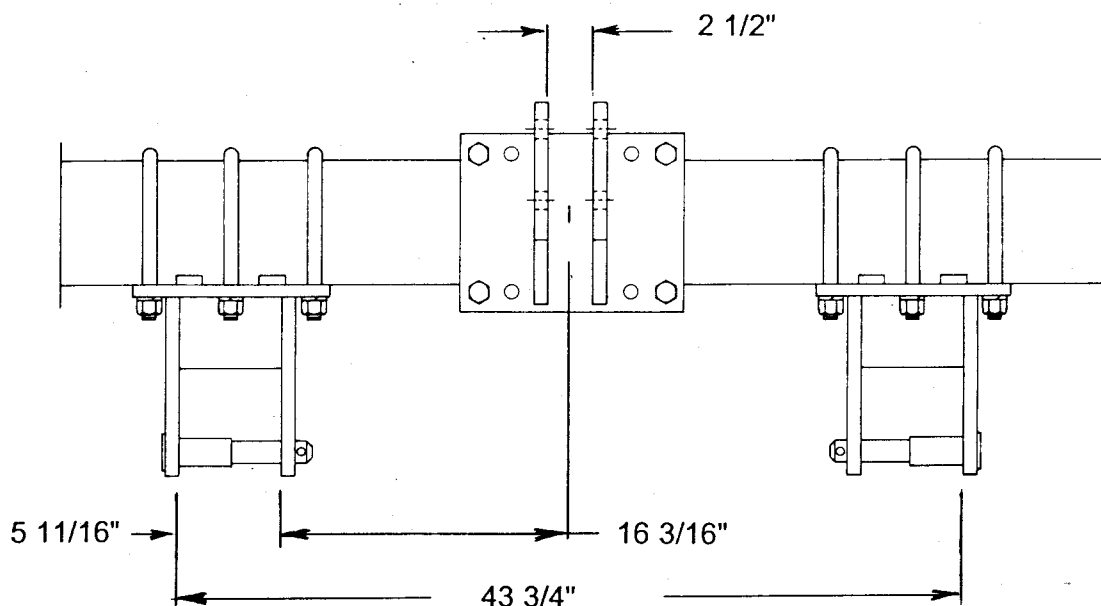
5/8" Dia. Bolts and U-Bolts ——— 145 Foot Pounds

3/4" Dia. Bolts and U-Bolts ——— 260 Foot Pounds

7/8" Dia. Bolts and U-Bolts ——— 415 Foot Pounds

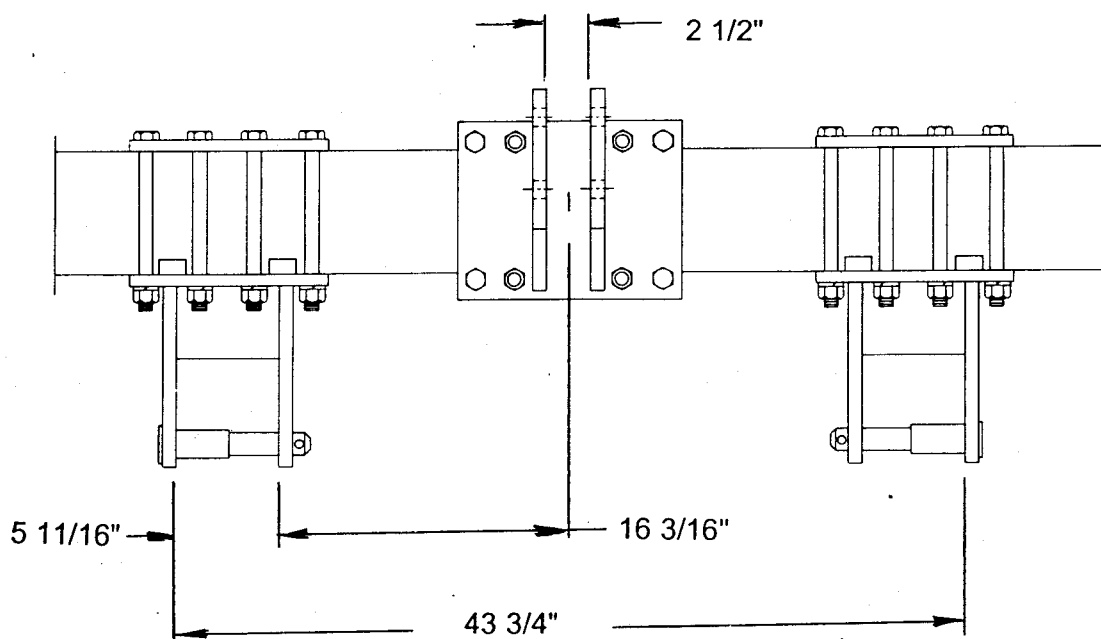
## PREPARING CULTIVATOR 3-POINT

### REF. A 302-14044 3-Point Hitch Assembly (4 -Thru 8-Row Models)



NOTE: See 302-14044 3-Point Hitch parts breakdown on page 3.6

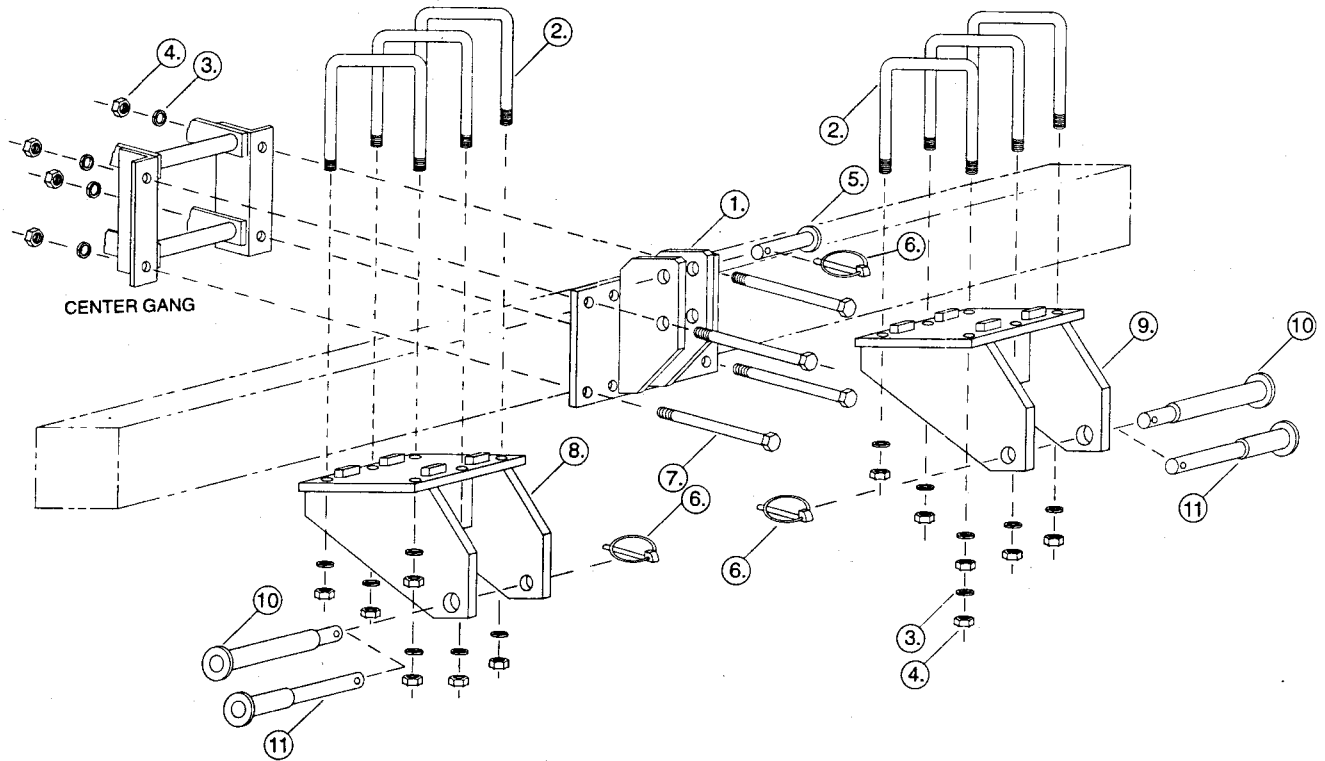
### REF. B 302-14045 3-Point Hitch Assembly (12-Thru 16-Row Models)



NOTE: See 302-14045 3-Point Hitch parts breakdown on page 3.5

## 3-POINT HITCH ASSEMBLY (4-THRU 8-ROW MODELS)

### Part No. 302-14044 3-Point Hitch Assembly

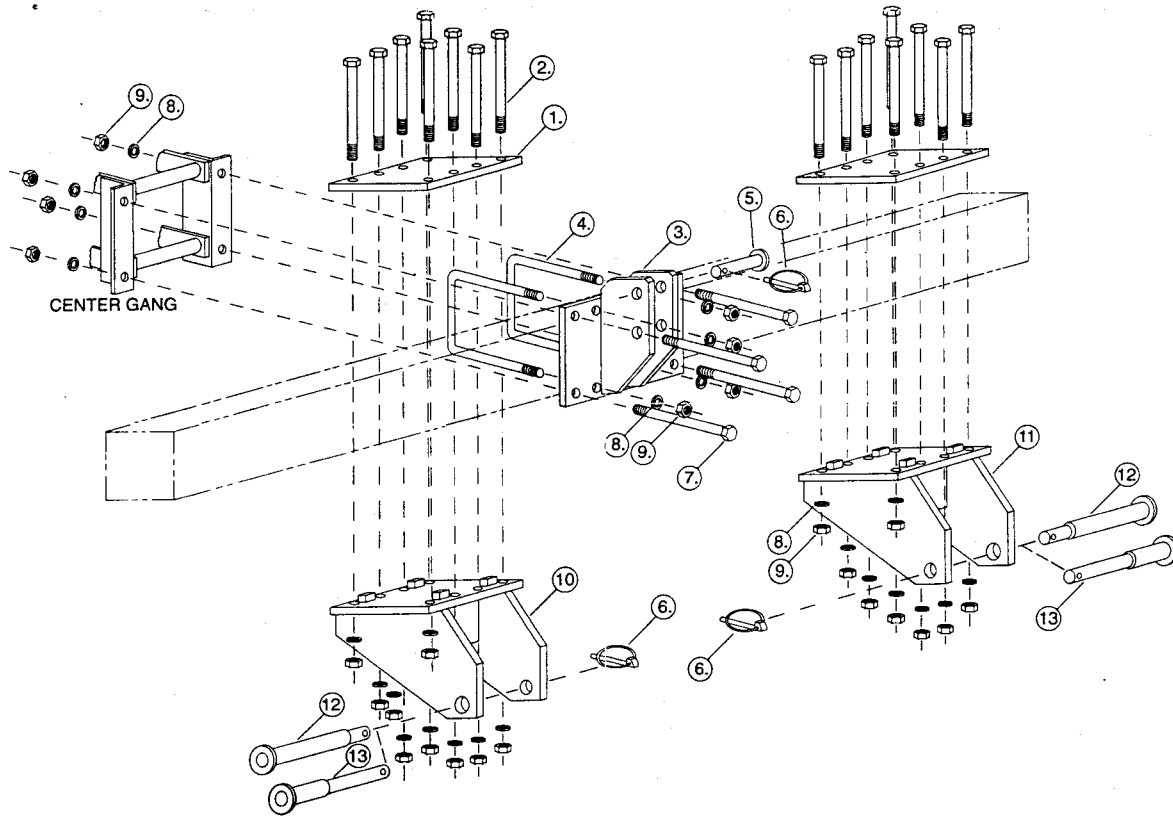


#### 3 - POINT HITCH PARTS ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1.	302-12457	TOP MAST WELDMENT	1
2.	302-11322	3/4 N.C. X 7 X 7 U-BOLT	6
3.	020-11750	3/4" LOCKWASHER	16
4.	017-116248	3/4" N.C. HEXNUT	16
5.	302-12736	PIN, MAST	1
6.	037-218324	7/16" LYNCH PIN	3
7.	016-186500	3/4 - N.C. HEXBOLT X 9 1/2" LG.	4
8.	302-12999	LOWER 3-POINT HITCH WELD'T (RIGHT HAND)	1
9.	302-12456	LOWER 3-POINT HITCH WELD'T(LEFT HAND)	1
10.	302-10508	CAT. III PIN	2
11.	302-10507	CAT.II PIN	2

## 3-POINT HITCH ASSEMBLY (12-THRU 16-ROW MODELS)

### Part No. 302-14045 3-Point Hitch Assembly



#### 3 - POINT HITCH PARTS ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
1.	302-13011	CLAMP PLATE	2
2.	016-186504	3/4 - N.C. HEXBOLT X 10" LG.	16
3.	302-12457	TOP MAST WELDMENT	1
4.	302-11322	3/4" N.C. X 7 X 7 U-BOLT	2
5.	302-12736	PIN, MAST	1
6.	037-218324	7/16" LYNCH PIN	3
7.	016-186500	3/4 - N.C. HEXBOLT X 9 1/2" LG.	4
8.	020-11750	3/4" LOCKWASHER	24
9.	017-116248	3/4" N.C. HEXNUT	24
10.	302-13005	LOWER 3-POINT HITCH WELD'T (RIGHT HAND)	1
11.	302-12524	LOWER 3-POINT HITCH WELD'T (LEFT HAND)	1
12.	302-10508	CAT.III PIN	2
13.	302-10507	CAT.II PIN	2

## TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Plugging between Coulter & shank	Gangs riding out (Gauge wheels off ground).	Digger points or plow lays are worn.
	Coulter not cutting residue.	Coulter not set deep enough.
Cultivator does not tow straight when operating.	Cultivator bar not level.	Adjust tractor 3-point lift arms to level cultivator toolbar.
	Gangs not spaced correctly.	See gang spacing diagrams in this manual.
Plugging and bunching on end of plow shares.	Cultivator tipped too far forward.	Adjust upper hitch link out.
Digger point not penetrating.	Digger point or shares worn.	Replace worn parts.
	Cutting coulter too deep.	Set coulter just deep enough to cut residue, also see setting gang depth page.
	Gauge wheel too shallow.	See setting gang depth page.
	Lacking enough down pressure.	See setting gang and down pressure page.
Slabbing	Cultivator set too deep	See setting gang depth page.
	Cultivating too fast for soil conditions	Reduce speed, ideal cultivating speed is between 6-7 mph.
Weeds undercut but not completely destroyed.	Cultivator set too deep.	See setting gang depth page.
	Tractor speed is too slow.	Increase speed, ideal cultivating speed is between 6-7 mph.
Gauge wheels bury (loose soil).	To much weight on gang.	Carry toolbar on tractor, and decrease down pressure setting.
Mud between gauge wheels.	Collected from coulter.	Install coulter scrapers, decrease coulter depth.
Extremely hard ground, point penetration difficult.	Not enough angle on point.	Shorten top 3-point link.

## STORAGE



### PREPARING CULTIVATOR FOR STORAGE

**CAUTION!** - Implement may tip over and cause bodily injury if unhitched incorrectly.

**Always lower parking stands, insert parking stand pin and secure with hair pin.**

1. Lower and secure parkings.
2. Clean up cultivator and store in dry place.
3. Inspect for damaged parts and replace before next season.
4. Repaint areas that have been scratched or chipped to prevent rusting.
5. Coat sweeps with grease or oil.
6. Coat hydraulic cylinder rods with grease if exposed.
7. Lubricate all grease zerks.

### REMOVING CULTIVATOR FROM STORAGE

1. Clean cultivator thoroughly.
2. If cylinder rods were exposed, clean grease off exposed rods.
3. Check all gang spacings to be sure they match your row widths.
4. Check all bolts and u-bolts for proper tightness.
5. Inflate tires to correct pressure, see proper pressure on tire side wall.
6. Lubricate all grease zerks and wheel bearings. physically inspect all sealed bearings.

# ASSEMBLY

## GENERAL

Before assembling cultivator, remove shipping bands or wires and arrange all parts where they can be readily seen.

When ever the terms **LEFT** and **RIGHT** side are used, it should be understood to mean from a position behind the cultivator and facing the direction of travel in field conditions.

During assembly, tighten bolts and u-bolts to the number of foot-pounds as indicated in the bolt torque chart on page **6.2**

## 3-POINT HITCH

Support toolbar on stands approx. 32" high. (**WARNING:** Do not use parking stands!) Measure the length of the toolbar and mark the center. Mount the 3-point hitch onto the toolbar using the dim. on page **3.4**

Connect toolbar with 3-point hitch mounted, to tractor and lower down onto stands, for protection against cultivator tipping over during ass'y preventing serious persona; injury.

For ass'y of gangs, gauge wheels & park stands see pages **7.1, 7.2**

## HYDRAULIC LINES (Folding Wing Cultivators)

Hydraulic lines are factory installed to the center of the toolbar. You must install two lines from the center of the toolbar to the tractor hydraulic remote outlets.

Attach the hydraulic lines to the tractor with the proper hydraulic adaptor. Before folding the wings, check to see if there is room above and beyond the toolbar, for the wings to fold over. **CAUTION!** hydraulic cylinders may not be filled with hyd. oil. Extend and retract cylinders only 3" for approx. four times to allow cylinders to fill with oil. if this procedure is not followed there could be damage to the cultivator or personal injury.

## GANG ASSEMBLY

See pages **8.3, 8.4** and **8.7** for gang ass'y (Mainframe & Gang Gauge Wheel).

See pages **8.5** and **8.6** for gang ass'y (Shank).

See pages **7.1** and **7.2** for gang locations on toolbar.

## TOOLBAR GAUGE WHEELS

See pages **8.8** for toolbar gauge wheel ass'y

See pages **7.1** and **7.2** for toolbar gauge wheel location.

## ASSEMBLING UNITS TO TOOLBAR

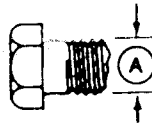
Spacings for attaching gangs, toolbar gauge wheels, and parking stands see pages **7.1** and **7.2**



# BOLT TORQUE CHART & DECAL IDENTIFICATION & PLACEMENT

SAE 2

SAE 5

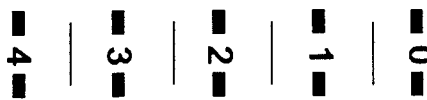


## BOLT TORQUE CHART

Tighten all bolts, U-bolts to the torques specified in the chart shown to the right. Also when replacing bolts, U-bolts and nuts, be sure that the replacements are the same size, type, and grade as the originals

BOLT TORQUE CHART		
(A) BOLT DIAMETER	MARKING ON HEAD	
	SAE 2 (lb - ft)	SAE 5 (lb - ft)
3/8"	18	30
7/16"	30	50
1/2"	45	75
9/16"	65	105
5/8"	90	145
3/4"	160	260
7/8"	165	415
1"	245	625
1 1/4"	490	1100

**NOTE:** Left and Right hand sides are determined by standing behind cultivator and facing the direction the cultivator will travel when going forward.



# 2700

Decal 302-12470 located on the front left side of center section, two on back side, each end of center section. (3-req. per cult.)

Decal 302-12473 located on the right side of gang, above coultter shown on page 3.2 of this manual. (2-req. per gang)

Decal 302-12472 located on the front right side of center section of cultivator. (1-req. per cultivator)

**WARNING**

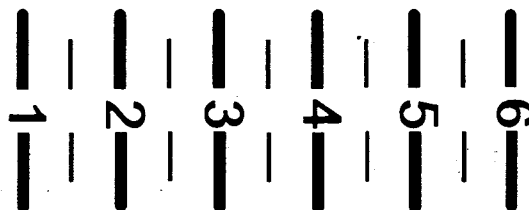
**HIGH-PRESSURE FLUID HAZARD**

To prevent serious injury or death:

- Relieve pressure on system before repairing or adjusting or disconnecting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

SW700

Decal 102-700 located on top of toolbar, on the left side of the top 3-point mast. (1-req. per cultivator)



Decal 302-12474 located on the right side of gang frame shown on page 3.2 of this manual. (1-req. per gang)

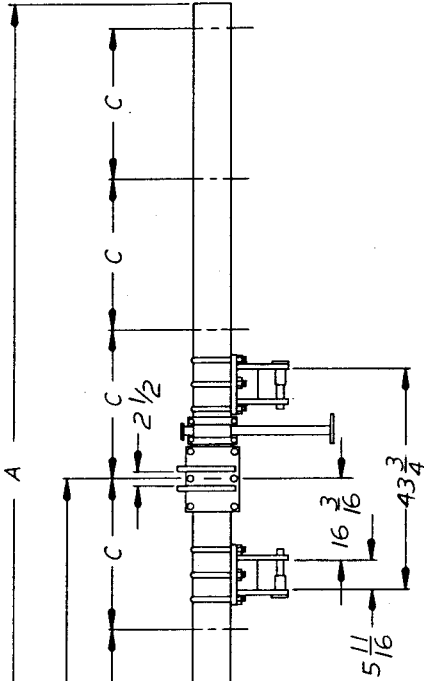
**DANGER**

**STAND CLEAR**  
Falling Wings May Cause  
Bodily Injury or Death

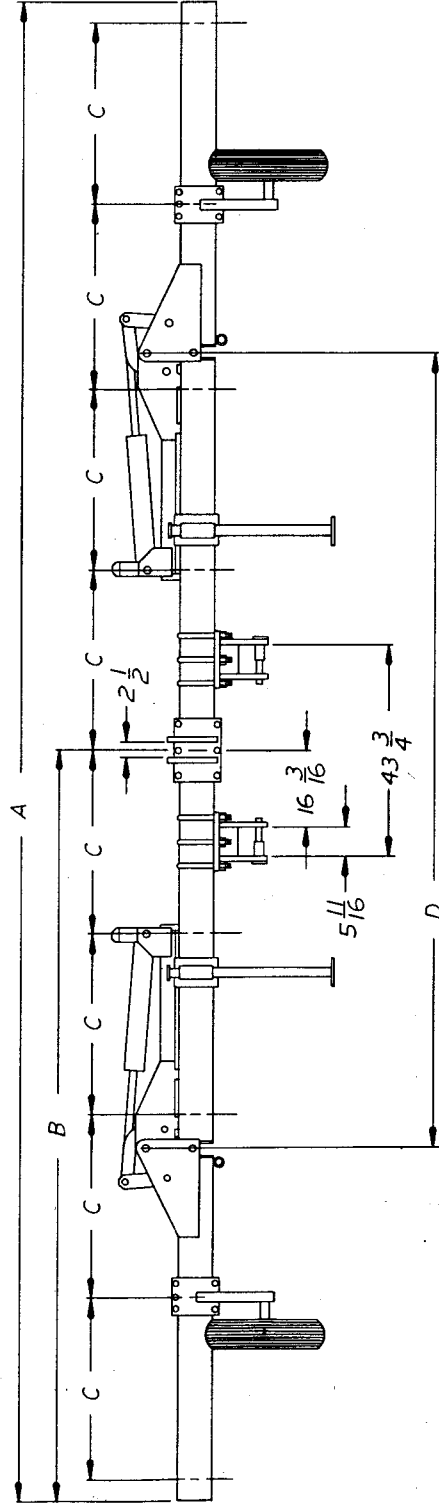
Decal 302-12469 located on the front and back sides of both wings, on the hinge plate. (4-req. per cultivator)

# ROW SPACING CHART AND DIAGRAM

(FOR 4-8 ROW NON-FOLDING, & 8-ROW NARROW & WIDE FOLDING)



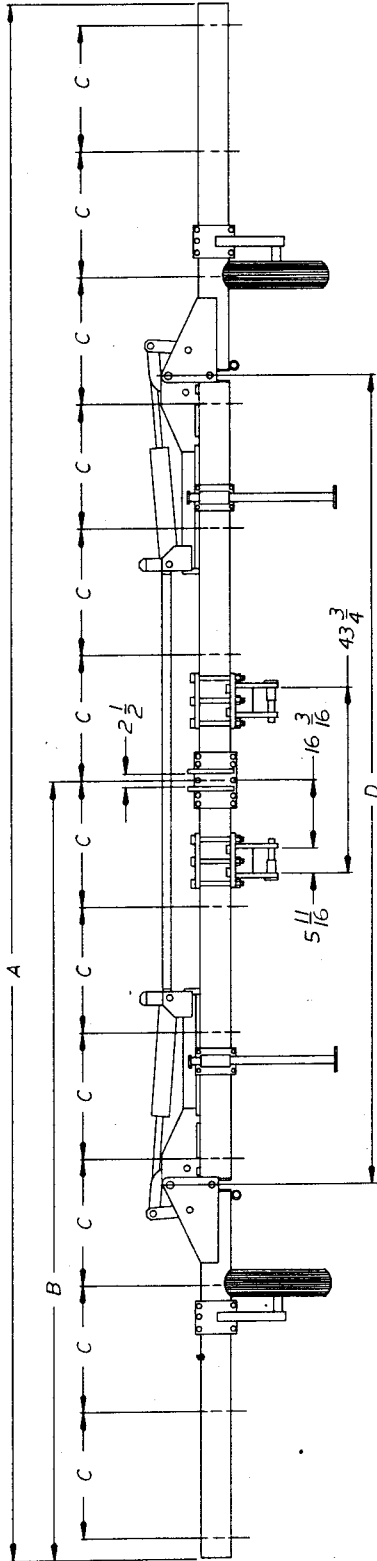
TOOLBAR NO.	CODE	NO./ ROWS	C	B	A	TOOL BAR	NO./ GANGS	PARK STANDS	TOOLBAR GAUGE WHEELS	3-POINT HITCH
302-12462-1	27004W	4	36"-38"	83"	166"	7 X 7	5	1/302-12466	NOT REQ.	302-14044
302-12462-2	27006N	6	30"	97"	194"	7 X 7	7	1/302-12466	NOT REQ.	302-14044
302-12462-3	27006W	6	36"-38"	121"	242"	7 X 7	7	2/302-12466	2/300-700185	302-14044
302-12462-4	27008N	8	30"	127"	254"	7 X 7	9	2/302-12466	2/300-700185	302-14044
302-12462-5	27008W	8	36"-40"	158"	334"	7 X 7	9	2/302-12466	2/300-700185	302-14044



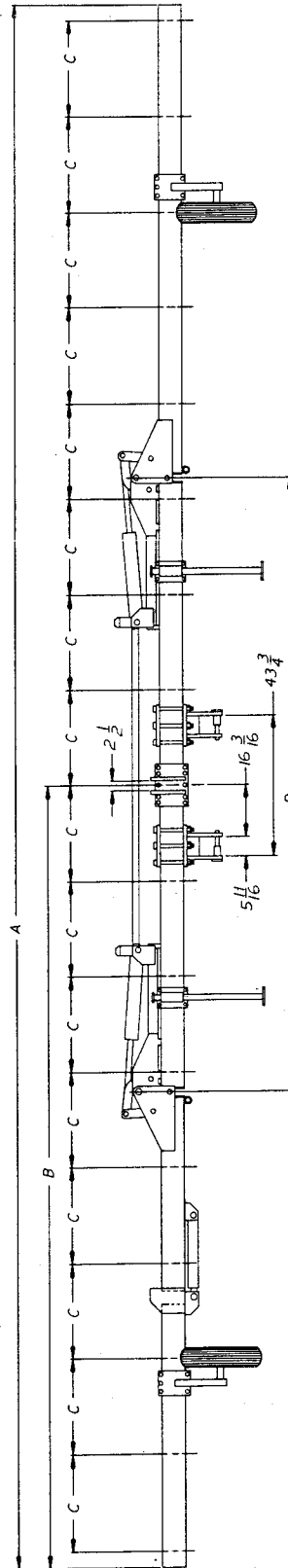
TOOLBAR NO.	CODE	NO./ ROWS	C	B	A	D	TOOLBAR CENTER/ WINGS	NO./ GANGS	PARK STANDS	TOOLBAR GAUGE WHEELS	3-POINT HITCH	WING CYLINDER	HINGE ASS'Y
302-11267-28	27008NHF	8	30"	126.75	253.5	137	7 X 7 / 7 X 7	9	2/302-12466	2/300-700185	302-14044	4 X 22	E
302-11267-29	27008WHF	8	36"-38"	158.5	317	170	7 X 7 / 7 X 7	9	2/302-12466	2/300-700185	302-14044	4 X 22	F

## ROW SPACING CHART AND DIAGRAM

(FOR 12-ROW NARROW & WIDE FLAT FOLD & 16-ROW NARROW FLAT FOLD)



TOOLBAR NO.	CODE	NO./ ROWS	C	B	A	D	TOOLBAR CENTER/ WINGS	NO./ GANGS	PARK STANDS	TOOLBAR GAUGE WHEELS	3-POINT HITCH	WING CYLINDER	HINGE ASSY
302-11267-30	270012NHF	12	30"	186.62	373.25	196.75	7 X 7 1/7 X 7	13	2/302-12466	2/300-700185	302-14045	4 X 22	G
302-11267-32	270012WHF	12	36" 98"	235	470	246.25	7 X 7 1/7 X 7	13	2/302-12466	2/300-700185	302-14045	4 X 22	H

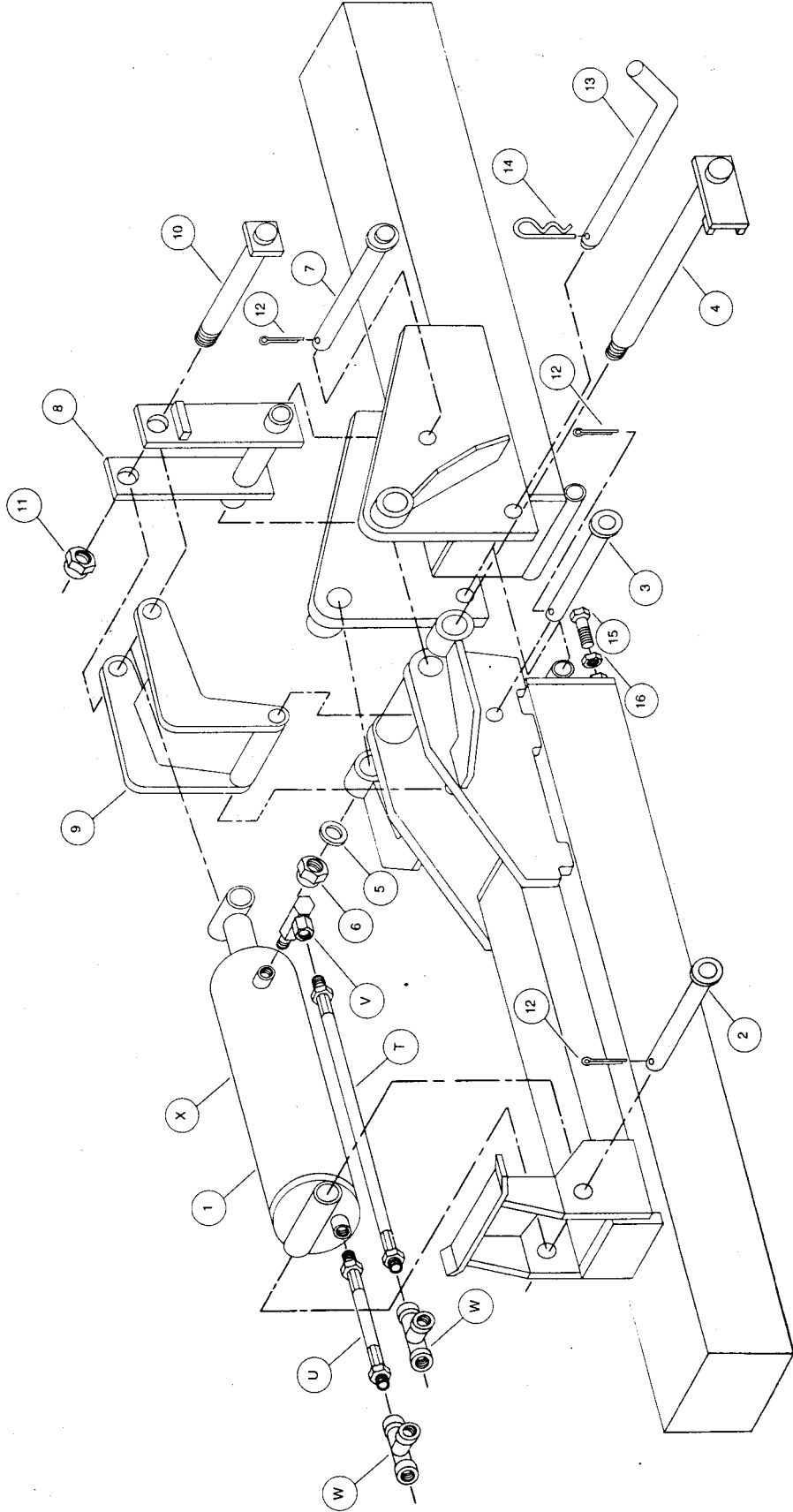


TOOLBAR NO.	CODE	NO./ ROWS	C	B	A	D	TOOLBAR CENTER/ WINGS	NO./ GANGS	PARK STANDS	TOOLBAR GAUGE WHEELS	3-POINT HITCH	WING CYLINDER	HINGE ASSY
302-11267-33	270016NHF	16	30"	247	494	256.5	7 X 7 1/7 X 7	17	2/302-12466	2/300-700185	302-14045	5 X 22	I

## HYDRAULIC FOLD HINGE ASS'Y

REF.	DESCRIPTION	ASS'Y (E) 8-ROW -N-30" HYD.FLAT FOLD	ASS'Y (F) 8-ROW-W-36"/38" HYD. FLAT FOLD	ASS'Y (G) 12-ROW -N-30" HYD. FLAT FOLD	ASS'Y (H) 12-ROW-W-36"/38 HYD. FLAT FOLD	ASS'Y (I) 16-ROW-N-30" HYD. FLAT FOLD
T	HOSE ASS'Y LONG	302-400024	302-400005	302-400013	302-400014	302-400016
U	HOSE ASS'Y SHORT	302-400022	302-400003	302-400011	302-400012	302-400015
V	3/8" 90 DEGREE SWIVEL	071-1501-6-6	071-1501-6-6	071-1501-6-6	071-1501-6-6	071-1501-6-6
W	3/8" STEEL TEE	071-5605-6-6	071-5605-6-6	071-5605-6-6	071-5605-6-6	071-5605-6-6
X	L.H.WING CYLINDER	400-13485	400-13485	400-13485	400-13485	400-10328
Y	R.H. WING CYLINDER	400-13468	400-13468	400-13468	400-1346	400-13090
1.	SEAL KIT	424-13536	424-13536	424-13536	424-13536	424-12873
2.	PIN, CYLINDER MTG.	302-11918	302-11918	302-11919	302-11919	302-11919
3.	PIN, LINK PIVOT	302-11920	302-11920	302-11920	302-11920	302-11920
4.	PIN, HINGE	302-11907	302-11907	302-11906	302-11906	302-11906
5.	MACH. BUSHING	020-42000	020-42000	020-42000	020-42000	020-42000
6.	LOCKNUT	401-12278	401-12278	401-12278	401-12278	401-12278
7.	PIN, LINK TO WING	302-10915	302-10915	302-10915	302-10915	302-10915
8.	LINK	302-10338	302-10338	302-10338	302-10338	302-10338
9.	BELLCRANK	302-10336	302-10336	302-10336	302-10336	302-10336
10.	PIN, LINK TO WING	302-11914	302-11914	302-11914	302-11914	302-11914
11.	LOCKNUT	401-12286	401-12286	401-12286	401-12286	401-12286
12.	COTTER PIN	032-424434	032-424434	032-424434	032-424434	032-424434
13.	WING LOCKPIN	302-12727	302-12727	302-12727	302-12727	302-12727
14.	HAIR PIN	049-202356	049-202356	049-202356	049-202356	049-202356
15.	HEXBOLT	016-176348	016-176348	016-176348	016-176348	016-176348
16.	JAMNUT	017-116238	017-116238	017-116238	016-116238	016-116238

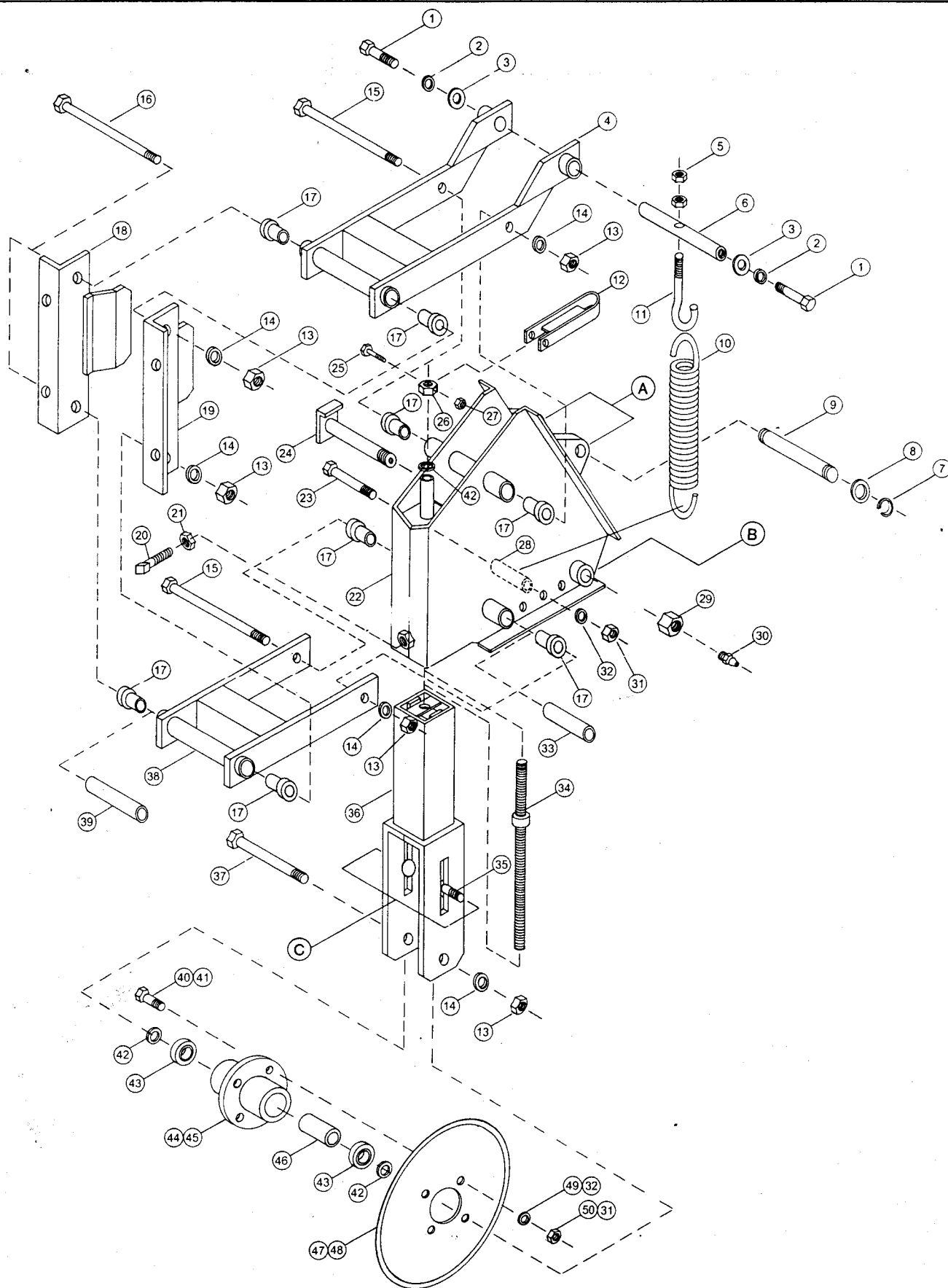
HYDRAULIC FOLD HINGE ASS'Y



## GANG ASS'Y (MAINFRAME)

ITEM	PART NO.	DESCRIPTION	PER GANG
1.	016-176330	5/8-N.C. Hexbolt x 1" lg.	2
2.	020-11625	5/8" Lockwasher	6
3.	020-21625	5/8" Flatwasher	2
4.	302-12423	Link Weldment, Upper	1
5.	017-116236	5/8" N.C. Hexnut	4
6.	302-12424	Pin, Upper Link	1
7.	302-1400-100	1" Retaining Ring	4
8.	020-32000	1" Machinery Bushing (Narrow)	4
9.	302-12426	Pin, Upper Link	1
10.	302-12962	Extension Spring	1
11.	302-12984	5/8" N.C. Eye Bolt	1
12.	302-12427	Coulter Adjuster Handle	1
13.	017-116242	3/4" N.C. Hexnut	5
14.	020-11750	3/4" Lockwasher	5
15.	016-186495	3/4" N.C. Hexbolt x 8 1/2" lg. Gr. 5	2
16.	016-186504	3/4" N.C. Hexbolt x 10" lg. Gr. 5	2
17.	302-12425	3/4" I.D. Replaceable Oilite Bushing	8
18.	302-12430	Right Mounting Angle	1
19.	302-12430	Left Mounting Angle	1
20.	047-402245	1/2" N.C. Sq. Hd. Set Screw x 1 1/4" lg.	1
21.	017-116225	1/2" N.C. Jam Hexnut	1
22.	302-12393	Gang Mainframe	1
23.	016-166312	1/2" N.C. Hexbolt x 4" lg. Gr. 5	1
24.	302-12429	Shank Pivot Pin	1
25.	016-126020	1/4" N.C. Hexbolt x 1 3/4" lg. Gr. 5	1
26.	017-116240	3/4" - 6 Acme Hexnut	1
27.	017-166505	1/4" N.C. Locknut	1
28.	302-12428	Extension Spring Bushing	1
29.	017-166556	1" N.F. Locknut	1
30.	031-341202	1/4 - 28 Grease Zerk	3
31.	017-116224	1/2" N.C. Hexnut	1
32.	020-11500	1/2" Lockwasher	1
33.	302-12449	Spacer, Mainframe	2
34.	302-12402	3/4 - 6 Acme Adjuster Bolt	1
35.	013-330969	5/8" N.C. Carriage Bolt x 2" lg.	2
36.	302-12400	Coulter Leg Weldment	1
37.	016-186468	3/4" N.C. Hexbolt x 5" lg. Gr. 5	1
38.	302-12432	Link Weldment, Lower	1
39.	302-12450	Spacer, Link	2
40.	016-146151 (For 18" Coulter Hub)	3/8" N.C. Hexbolt x 1 1/4" lg. Gr. 5	4
41.	016-166282	1/2" N.C. Hexbolt x 1 1/2" lg. Gr. 5	1
42.	020-31750	3/4" Machinery Bushing, Narrow	3
43.	302-25005	3/4" I.D. Sealed Bearing (For both Hubs)	2
44.	302-12433	4-Bolt Hub (For 18" Coulter)	1
45.	302-12434	4-Bolt Hub (For 20" Fluted Coulter)(Optional)	1
46.	302-12435	Bearing Spacer (For both Hubs)	1
47.	302-10164	18" Coulter Blade (Shown)	1
48.	602-10346	20" Fluted Coulter Blade (Optional)	1
49.	020-11375	3/8" Lockwasher	8
50.	017-116212	3/8" N.C. Hexnut	8

# GANG ASS'Y (MAINFRAME)



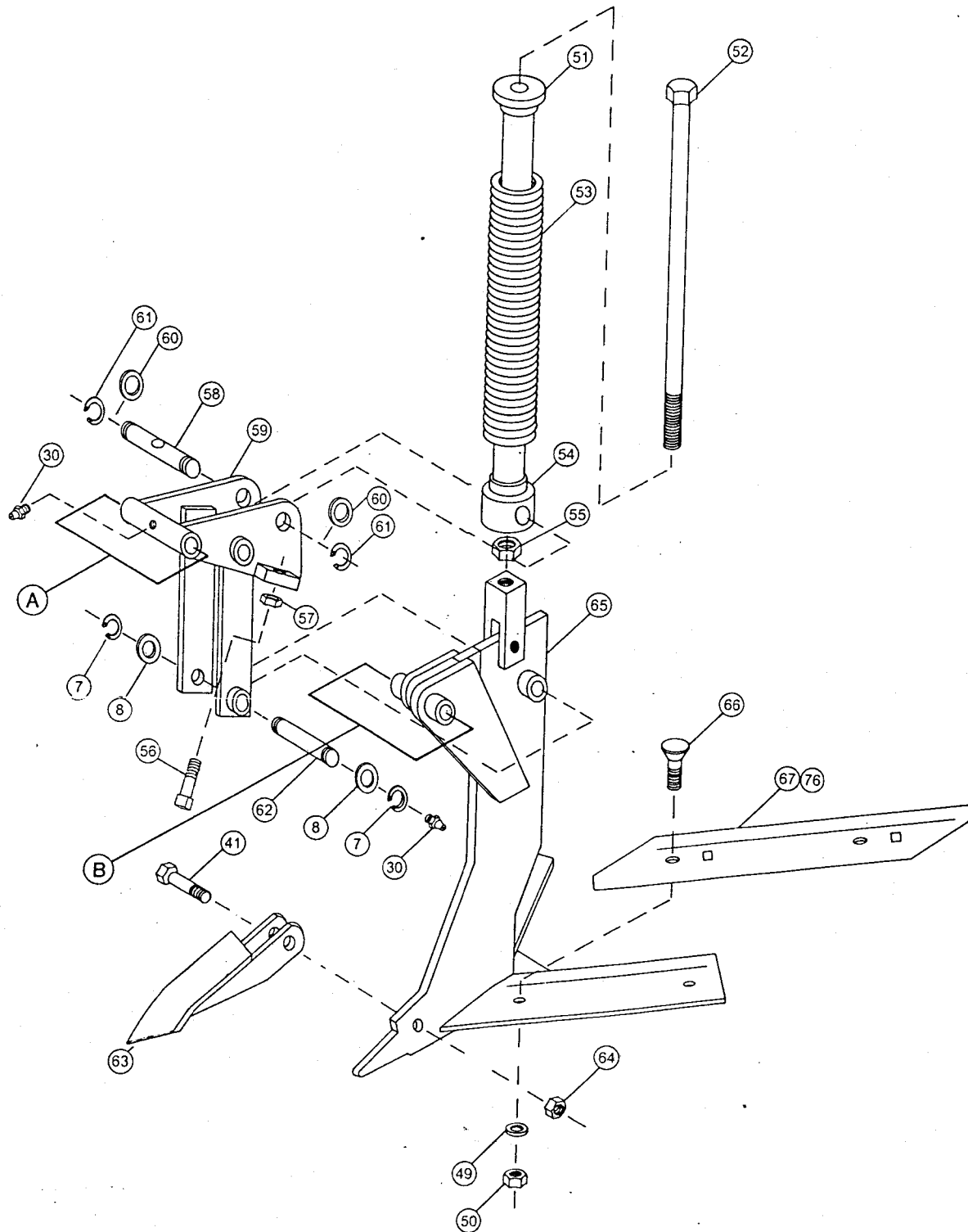
## SHANK ASS'Y (GANG)

ITEM	PART NO.	DESCRIPTION	QTY.
7.	302-1400-100	1" Retaining Ring	2
8.	020-32000	1" Machinery Bushing (Narrow)	2
30.	031-341202	1/4-28 Grease Zerk	2
41.	016-166282	1/2" N.C. Hexbolt x 1 1/2"lg.	1
49.	020-11375	3/8" Lockwasher	4
50.	017-116212	3/8" N.C. Hexnut	4
51.	302-12387	Spring Guide	1
52.	302-12388	3/4" N.C. Hexbolt x 21" lg.	1
53.	302-12391	Compression Spring	1
54.	302-12386	Swivel, Spring Mount	1
55.	017-116243	3/4" N.C. Hex Jam Nut	1
56.	047-402228	7/16" N.C. Sq. Hd. Set Screw x 1 1/2"lg.	2
57.	017-116219	7/16" N.C. Hex Jam Nut	2
58.	302-12439	Pivot Pin, Upper	1
59.	302-12384	Link & Toggle Weldment	1
60.	020-32250	1 1/4" Machinery Bushing, Narrow	2
61.	302-1400-125	1 1/4" Retaining Ring	2
62.	302-12440	Pivot Pin, Lower	1
63.	300-270481	Digger Point w/Cap	1
64.	017-166529	1/2" N.C. Locknut	1
65.	302-12442	T1 Standard Shank Weldment	ref.
	302-12993	T1 Left Hand Weldment	ref.
	302-12992	T1 Right Hand Weldment	ref.
66.	302-12443	3/8"N.C. Plow Bolt x 1 1/4"lg.	4
67.	300-270330	17" Plain Reversible Plow Lays	ref.
68.	300-270340	17" Hard Surfaced Reversible Plow Lays	ref.
69.	300-270350	19" Plain Reversible Plow Lays	ref.
70.	300-270360	19" Hard Surfaced Reversible Plow Lays	ref.
71.	300-270370	21" Reversible Plow Lays	ref.
72.	300-270380	21" Hard Surfaced Reversible Plow Lays	ref.
73.	300-270390	25" Plain Reversible Plow Lays	ref.
74.	300-270400	25" Hard Surfaced Reversible Plow Lays	ref.
75.	300-270410	27" Plain Reversible Plow Lays	ref.
76.	300-270420	27" Hard Surfaced Reversible Plow Lays	ref.
77.	300-270440	31" Plain Non-Reversible Plow Lays	ref.
78.	300-270450	31" Hard Surfaced Non-Reversible Plow Lays	ref.
79.	300-270461	33" Plain Non-Reversible Plow Lays	ref.
80.	300-270470	33" Hard Surfaced Non-Reversible Plow Lays	ref.



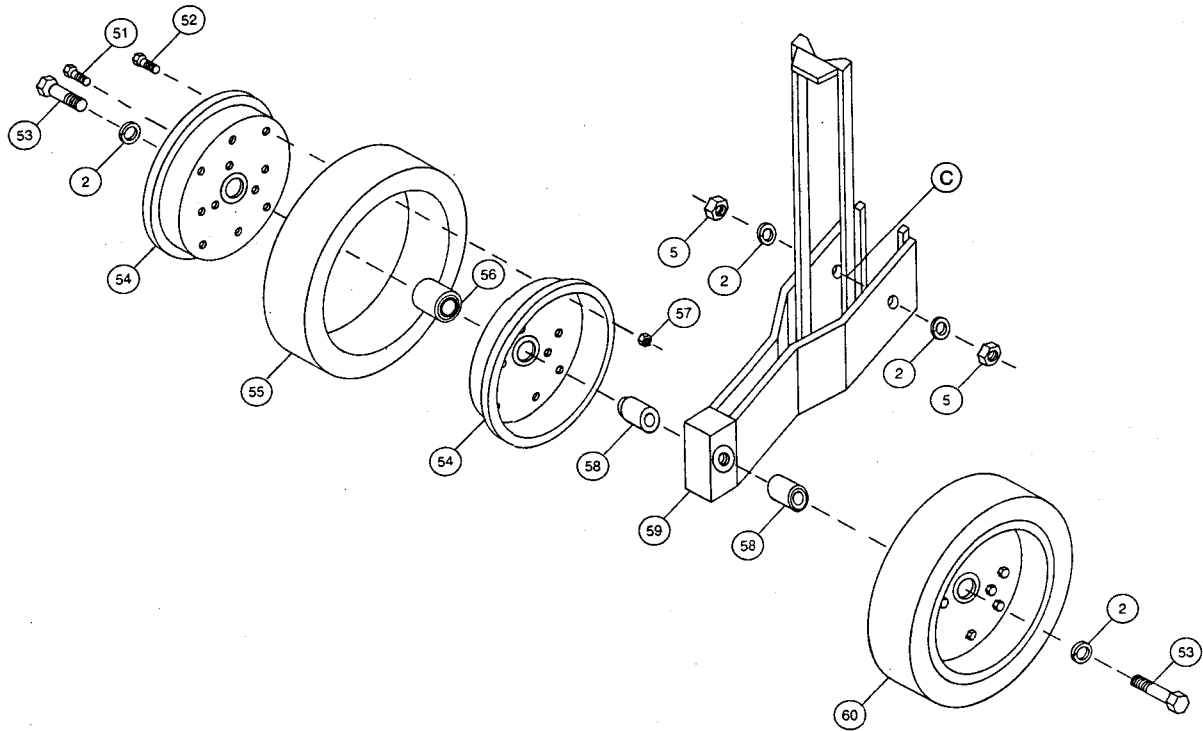
## SHANK ASS'Y (GANG)

**NOTE:** Item (A) on page 8.6 (Toggle Link Weldment) connects to Gang Mainframe (page 8.4) where Toggle Pin (item 13) is located . Item (B) Shank Weldment (page 8.6) connects to Gang Mainframe (page 8.4) where Shank Pivot Pin (item 12) is located.



## GANG GAUGE WHEEL ASSEMBLY

**NOTE:** In the diagram below Item (C) assembles to Item (C) in the Diagram on page 8.4 (gang assembly). To reference item numbers in this diagram other than 51. - 61., see page 8.3 gang assembly. Also note: Prior to 1997 item 54. was a steel split rim, which is no longer available.



### GANG GAUGE WHEEL PARTS ASSEMBLY

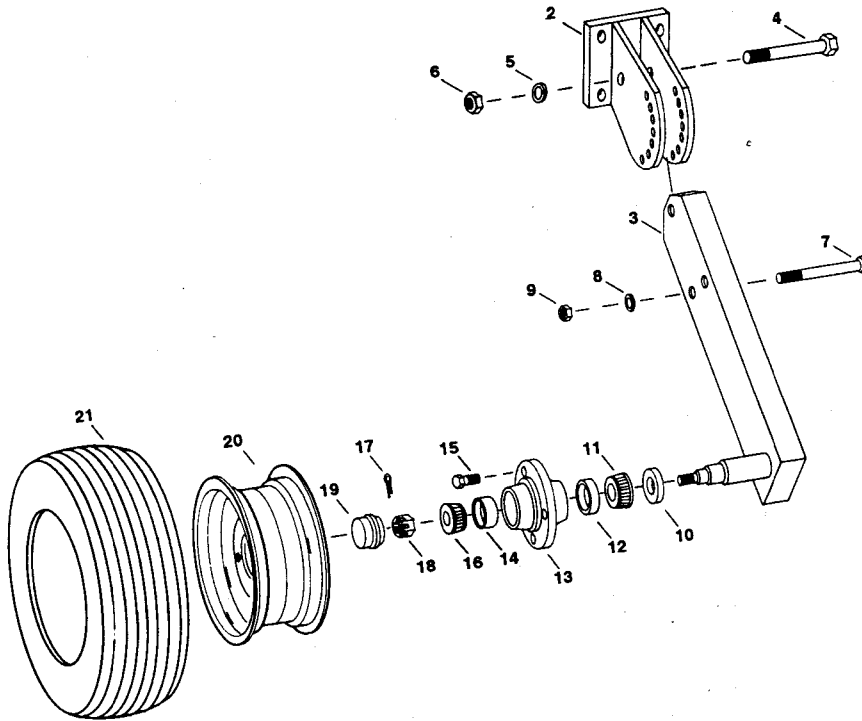
ITEM	PART NO.	DESCRIPTION	PER GANG
51.	016-136088	5/16-N.C. Hex Washer Hd. Bolt x 1 1/2" lg.	(each
52.	016-136105	5/16-N.C. Hex Washer Hd. Bolt x 3" lg.	(each)
53.	016-176372	5/8-N.C. Hexbolt x 4" lg.	2
54.	302-14048	4 x 16 Split Rim (Plastic)	(each)
55.	302-14049	4 x 16 Semi-Pneumatic Tire	(each)
56.	302-14050	5/8" I.D. Sealed Bearing	2
57.	017-116208	5/16-N.C. Hex Washer Locknut	(each)
58.	302-12437	5/8" I.D. Gauge Wheel Spacer	2
59.	302-12438	Gauge Wheel Arm	1
60.	302-12436	(Complete) 4 x 16 Gang Gauge Wheel	2

## TOOLBAR GAUGE WHEEL ASSEMBLY

NOTE: Toolbar Gauge Wheels (Pair) are Standard Equipment on all 2700 Hydraulic Flat Folding Models. If you wish to add additional Gauge wheels, the Optional Part No. is as follows:

**300-700180 - Large Gauge Wheel Kit w/15 x 4.5" Rims (Pair)**

**300-300230 - 590 x 15" or equiv. tire for above large gauge wheel kit (Each)**



### TOOLBAR GAUGE WHEEL PARTS ASSEMBLY

ITEM	PART NO.	DESCRIPTION	QTY.
2.	302-13017	7 x 7 Mounting Bracket	1
3.	302-13014	Leg, Gauge Wheel	1
4.	016-176366	5/8" N.C. Hexbolt x 3 1/2" lg.	1
5.	020-11625	5/8" Lock Washer	1
6.	017-116236	5/8" N.C. Hexnut	1
7.	016-166306	1/2" N.C. Hexbolt x 3 1/2" lg.	1
8.	020-11500	1/2" Lock Washer	1
9.	017-116224	1/2" N.C. Hexnut	1
10.	050-41111	Hub Seal	1
11.	019-1-LM67048	Inner Bearing	1
12.	019-LM67010	Cup, Inner	1
13.	050-41100	4-Bolt Hub w/Cups	1
14.	019-LM11910	Cup, Outer	1
15.	050-41150	1/2"-N.F. Wheel Bolt x 1 1/4" lg.	4
16.	019-LM11949	Outer Bearing	1
17.	032-424302	Cotter Pin 1/8" Dia. x 2" lg.	1
18.	017-170190	3/4"-16 Slotted Nut	1
19.	050-41160	Dust Cap	1
20.	050-15041	15" 4-Bolt Rim	1
21.	300-300230	15" Tire (OPTIONAL)	1

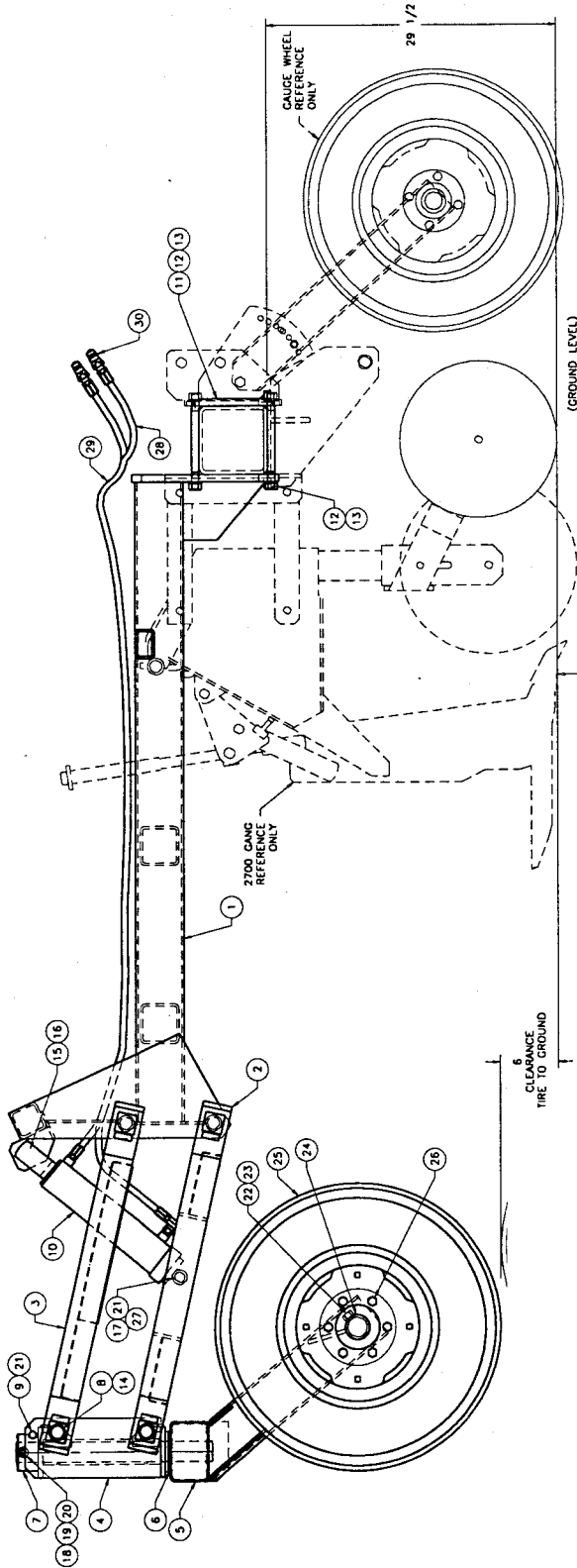
## OPTIONAL WETHERELL LIFT ASSIST

### Lift Assist Parts Assembly

ITEM	PART NO.	DESCRIPTION
1.	302-12298	Frame Main Weld't
2.	302-12300	Arm, Lower
3.	302-12301	Arm, Upper
4.	302-12299	Support, Wheel
5.	302-12302	Frame, Castor
6.	302-12306	Collar, Thrust
7.	302-12304	Cam , Anti-Shimmy
8.	302-12303	Pin, Arm
9.	302-12305	Shaft, Spring
10.	400-13154	Cylinder, Hydraulic
11.	060-11322	U-Bolt
12.	017-116242	Nut, Hex 3/4-10 UNC
13.	020-11750	Washer, Lock
14.	017-166565	Nut, Locking Thin 1 1/4
15.	426-13007	Pin, Clevis
16.	049-202356	Hair pin 5/32
17.	302-11846	Pin Weld Pivot Bellcrank
18.	016-156246	Hexbolt 7/16-14 UNC x 4"lg.
19.	017-116218	Hexnut 7/16-14UNC
20.	020-11437	7/16" Lockwasher
21.	032-424368	Cotter Pin 3/16 x 1 1/2
22.	047-402284	Set Screw 5/8-11UNC x 1 1/2"lg.
23.	017-116238	Jam Nut 5/8-11UNC
24.	302-13199	Spindle and Hub Ass'y
25.	302-13199	Wheel and Tire Ass'y
26.	050-41150	Wheel Bolt
27.	600-425110	Depth Stop Set Cylinder Rod
28.	302-13669	Hose, Hydraulic
29.	302-13197	Hose, Hydraulic
30.	071-8010-4MB	ISO Male Tip x 1/2 FPT
31.	031-341202	Grease Zerk 1/4-28 UNF

# OPTIONAL WETHERELL LIFT ASSIST

Note: If you have purchased a 2700 All -Till Cultivator without Wetherell Lift Assist, and would like to add this Option, the Part Number for Lift Assist Bundle (Hyd. Cylinder, Hoses to Tractor, and Tire included.) is 300-700175



## OPTIONAL HILLERS ( CUT AWAY DISC )

**Note:** If you have purchased a 2700 All-Till cultivator without Hillers, and would like to add this Option, the Part Number for Hillers (Per Row) is 300-270490.

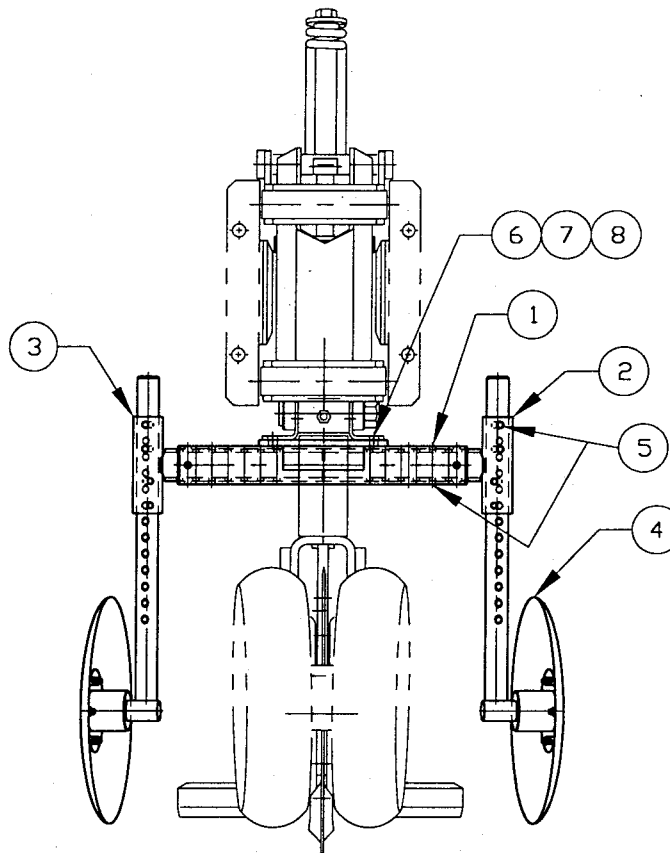
### ASSEMBLY OF DISC HILLERS

#### ON ONE GANG

Place disc hiller mount (item # 1) under mounting flange of gang frame in the forward of two positions. Bolt mount in place with 4 - 1/2" bolts, nuts, and lockwashers (items # 6, 7, 8). Insert Left Hand pivot (item # 2) and Right Hand pivot (item # 3) in mount, turned to the alternate (horizontal) position, temporarily pin in place (item # 5). Insert disc/axle ass'y's (item # 4) in both pivots, oriented to take away from or deposit soil to crop row. Establish disc to soil engagement height, pin in place (item # 5). Remove temporary pin to telescope disc/pivot ass'y's to width, allowing clearance to crop row.

#### ON REMAINING GANGS

Use the accumulated information to assemble the remaining units.

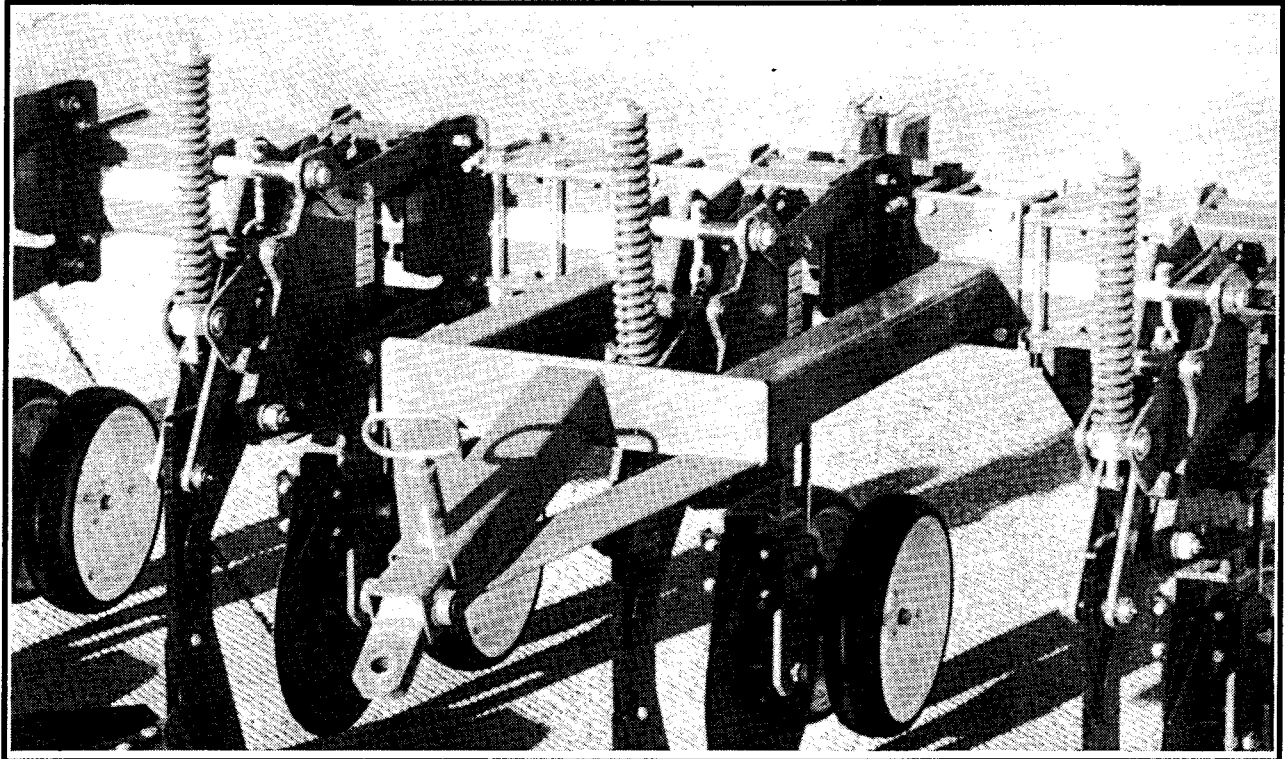


**DISC HILLER ASS'Y**

ITEM	PART NUMBER	DESCRIPTION	Qty. Per Gang
1.	302-13263	Mount Disc Hiller	1
2.	302-13267	Left Hand Pivot Weld't	1
3.	302-13268	Right hand Pivot Weld't	1
4.	302-13273	Disc/Axle Ass'y	2
5.	037-233752	Safety Pin (Snap)	4
6.	016-166282	1/2"-N.C. Hexbolt x 1 1/2" lg.	4
7.	017-116224	1/2"-N.C. Hexnut	4
8.	020-11500	1/2" Lockwasher	4

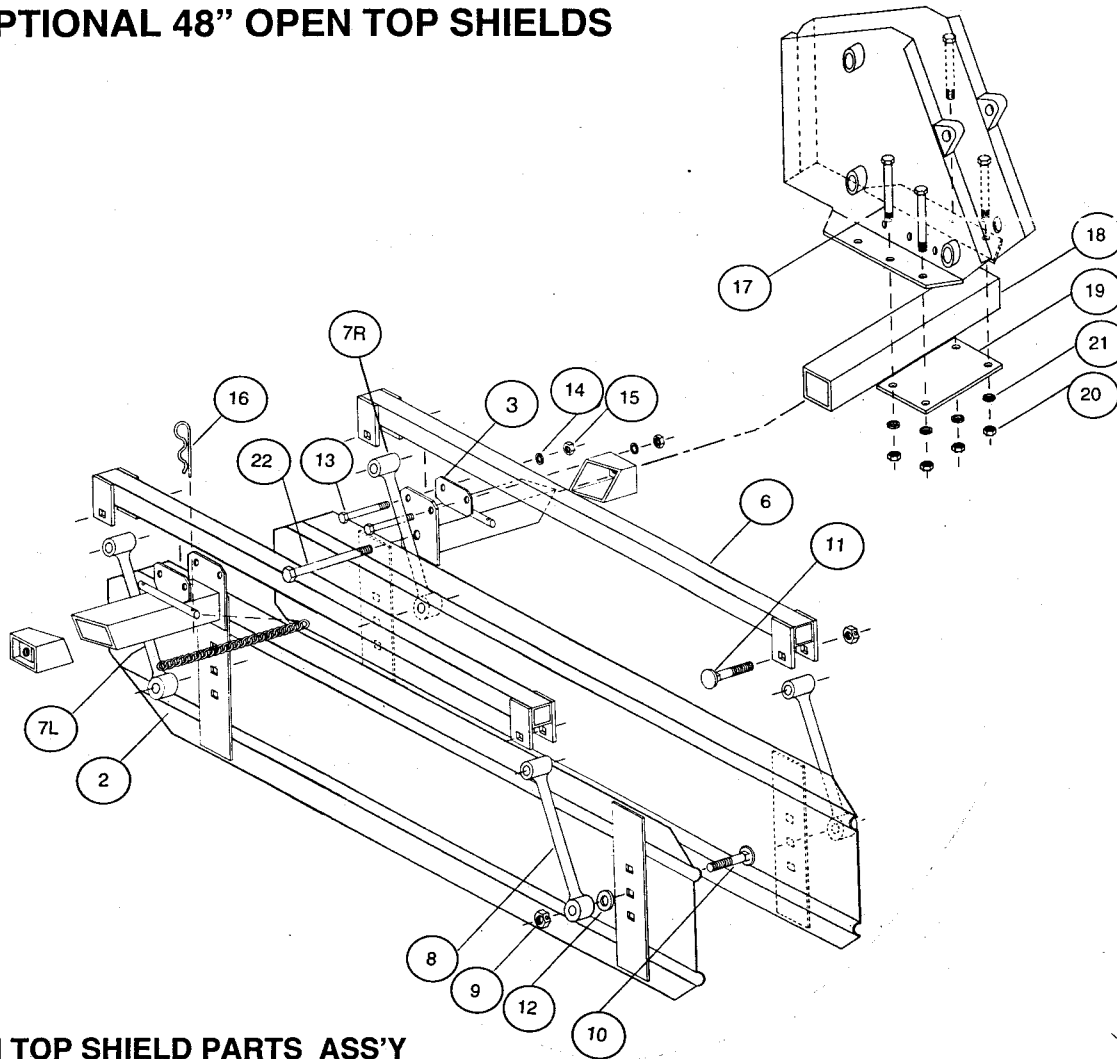
## OPTIONAL NH3 HITCH

**NOTE:** If you have purchased a 2700 All-Till cultivator, without the Telescoping NH3 (anhydrous) Hitch, and would like to add this Option, the Part Number is 300-270510 complete.



The Wetherell Telescoping NH3 (Anhydrous) Hitch, bolts on to cultivator toolbar, over center gang. 4- 5/8" x 7 x 7 U-Bolts are required, and are included. The NH3 Hitch has a telescoping Tang for adjustment and easier hookup to pull type Anhydrous Tank.

# OPTIONAL 48" OPEN TOP SHIELDS



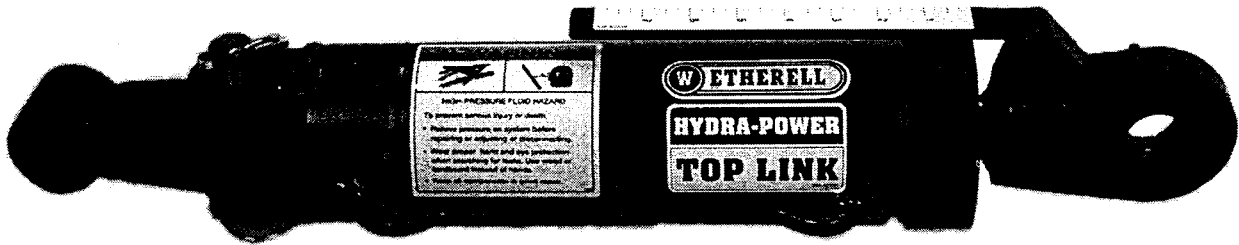
## OPEN TOP SHIELD PARTS ASS'Y

ITEM	PART NO.	DESCRIPTION
2.	300-12248	48" Open Top Shield
3.	302-13525	2" Wedge Tube Weld't
	302-13521	2" Wedge (included w/ 2" wedge tube)
6.	302-12256	Upper Tube Weldment
7L	302-13495	Left Hand Link w/chain
7R	302-13494	Right Hand Link w/chain
8.	302-12251	Shield Link
9.	017-166532	7/16"-N.C. Locknut
10.	013-330688	7/16"-N.C. Carriage Bolt x 2" lg.
11.	013-330696	7/16"-N.C. Carriage Bolt x 2 1/2" lg.
12.	020-21437	7/16" Flatwasher
13.	013-330403	5/16"-N.C. Hexbolt x 2 1/4" lg.
14.	020-11315	5/16" Lockwasher
15.	017-116206	5/16"-N.C. Hexnut
16.	049-202348	Hair Pin
17.	019-156246	7/16"-N.C. Hexbolt x 4" lg.
18.	302-13545	Cross Tube 2 1/2" Sq. x 3/16 Wall x 16" lg. (For Narrow Rows)
	302-13546	Cross Tube 2 1/2" Sq. x 3/16 Wall x 18" lg. (For Wide Rows)
19.	302-13496	Clamp Plate
20.	017-116218	7/16" Hexnut
21.	020-11437	7/16" Lockwasher
22.	016-176420	5/8" N.C. Hexbolt x 10" lg.

**NOTE:** If you have purchased a 2700 Minimum Till-Cultivator without Open Top Shields, and would like to add this Option the Part Number for 48" Open Top Shields (Per Row) is 300-270320 (Mounting Brackets Included).



## OPTIONAL HYDR-POWER TOP LINK



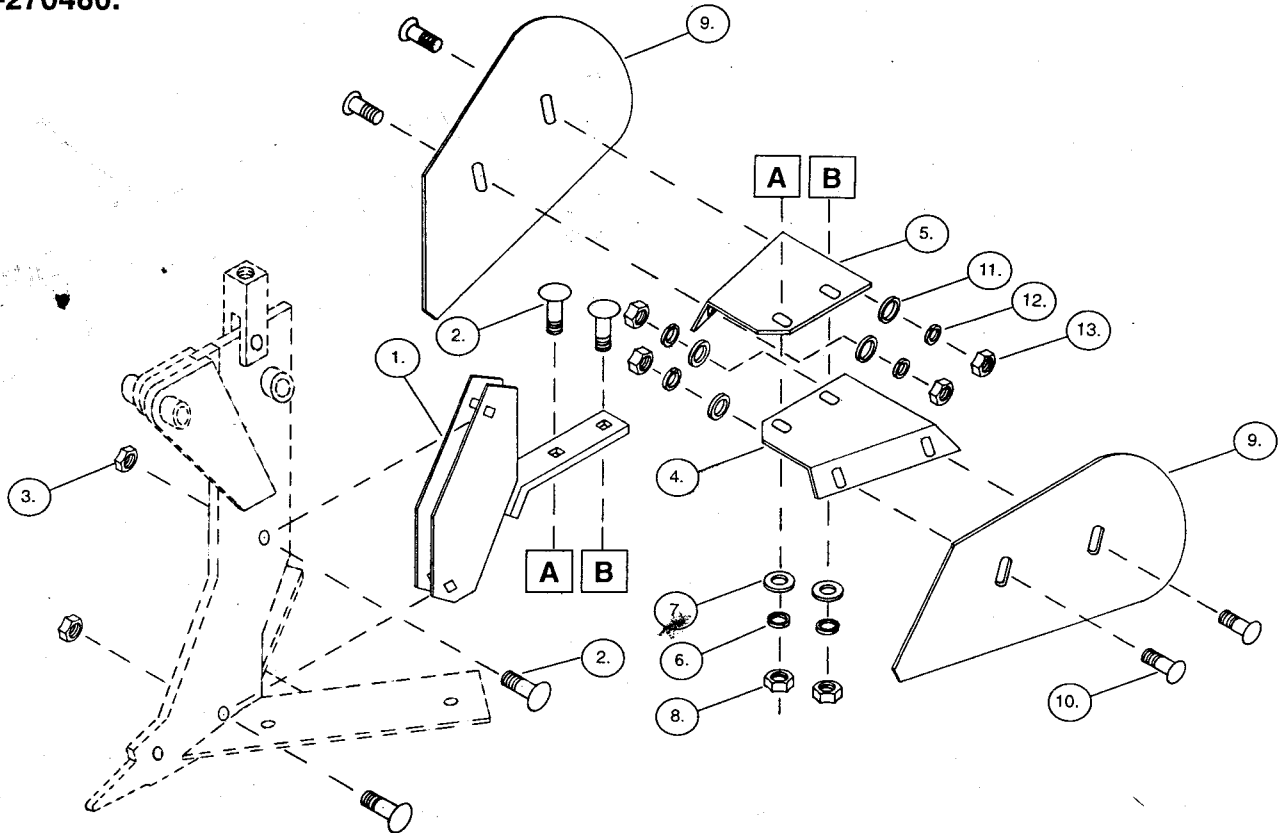
**Hydra-Power Top Link Part No. 340-012635**

The Hydra-Power Top Link assembly is comprised of a 3 1/2" bore x 7" stroke cylinder, with 4 1/4" and 7 1/2" Spacer Bars; built in check and Counter Balance Valves; Easy read Depth Gauge; Heavy Duty Swivel Socket on rod end; and Cat. II bushings. The Top Link, designed so you can eliminate the top 3-point turnbuckle to fully utilize your quick hitch, or your tractor's top 3-point . Tilt your quick hitch back and forth from the tractor cab when hooking up to unlevelled implements; Increase or decrease implement angle when cultivating, as soil type varies from one end of the field to the other. Top link locks cylinder in place, with check & counter balance valve (No Drifting, in or out) even in the event of a ruptured hydraulic hose; Make adjustments on the go, easy to read ruler type cylinder stroke gauge for accurate adjustment from the tractor seat.

**For complete OPERATORS MANUAL AND PARTS BOOK - PART NO. 340-98129**

## OPTIONAL DELUXE RIDGE BUILDERS

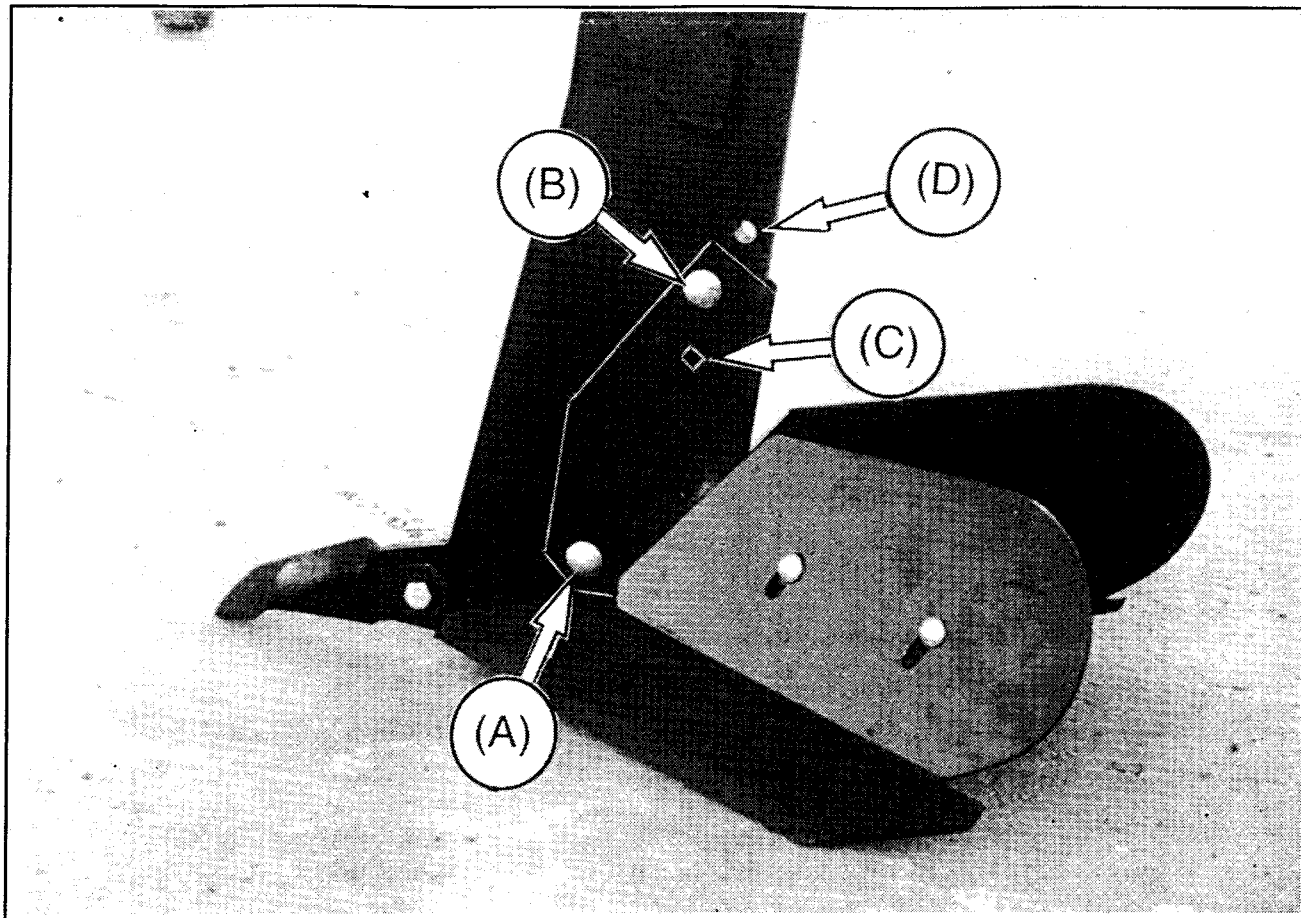
**Note: If you have purchased a 2700 All-Till Cultivator without Deluxe Ridge Builders, and would like to add this Option, The Part No. for Deluxe Ridge Builders (PER ROW) is 300-270480.**



### DELUXE RIDGE BUILDER PARTS ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	PER GANG
1.	302-12491	Ridger Mount Weld't	1
2.	013-330803	1/2"-N.C. Carriage Bolt x 1 1/2" lg.	4
3.	017-166529	1/2"-N.C. Locknut	2
4.	302-13000	Left Hand Adjuster Support	1
5.	302-12492	Right Hand Adjuster Support	1
6.	020-11500	1/2"-N.C. Lockwasher	2
7.	020-21500	1/2"-N.C. Flatwasher	2
8.	017-116224	1/2"-N.C. Hexnut	2
9.	302-12488	Ridger Blade	2
10.	013-330662	7/16"-N.C. Carriage Bolt x 1" lg.	4
11.	020-21437	7/16" Flatwasher	4
12.	020-11437	7/16" Lockwasher	4
13.	017-116218	7/16"-N.C. Hexnut	4

## OPTIONAL DELUXE RIDGE BUILDERS



### SIDE VIEW OF DELUXE RIDGE BUILDERS ON 2700 ALL-TILL SHANK

NOTE: The photo above shows Deluxe Ridge Builders mounted on a 2700 All-Till cultivator shank.

The convenience of the ridge builder is that it's not necessary to remove them from the cultivator when there not needed ; simply remove Carriage bolt (A), Loosen carriage bolt (B) , swing ridge builder ass'y up ; line up bracket hole (C) with shank hole (D) place carriage bolt (A) through (C) & (D) , tighten both carriage bolts and your field ready.