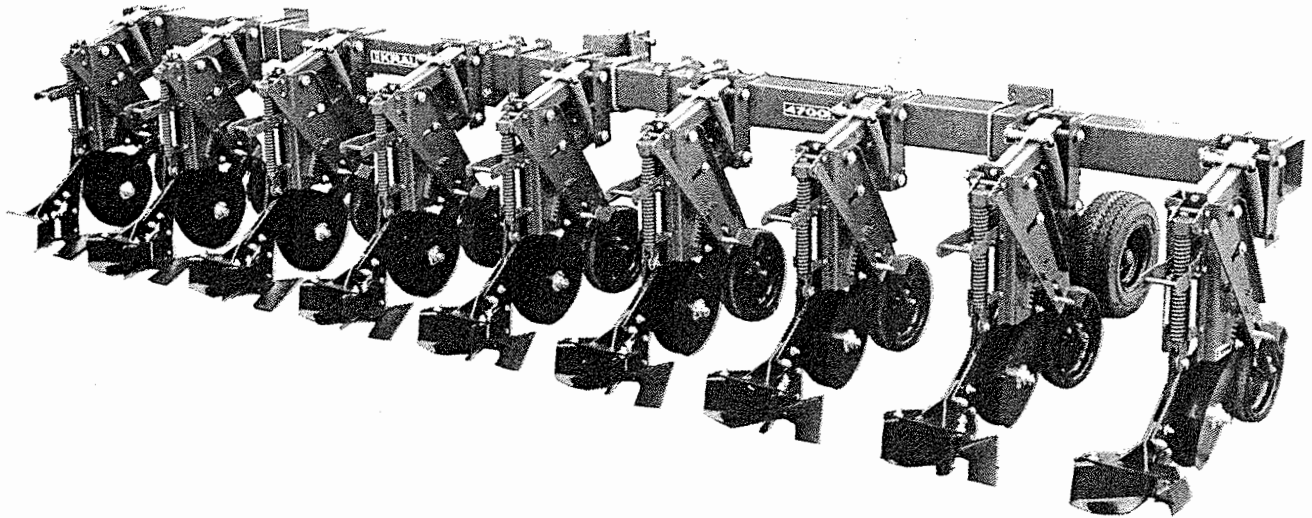


OWNER'S MANUAL

APR 2000 4700  
4730  
4750



# HIGH RESIDUE ROW CROP CULTIVATOR

## 4700 SERIES

# KRAUSE

P.O. BOX 2707 / 305 SOUTH MONROE STREET

HUTCHINSON, KANSAS 67504-2707



## A note to our customers, parts managers and dealers:

This manual has been prepared to assist you in the proper use, daily care, and operation of your new Krause equipment. It contains specific information on the many built-in features of your equipment, the accessories and options that are available, general specifications, and instructions for making minor adjustments.

Read this manual carefully before operating your Krause equipment, and keep it in a convenient location for later reference.

In order to ensure that you have the most current owner's manual available for your implement, we have added a revision code to each manual. Please note the information listed below and specify when placing service calls or ordering parts.

Manual for Model: 4700-4750

This manual covers models beginning with Serial No. 1557

Owner's Manual #: 4700-1

Parts Manual #: 4700-2

Rev.:

ISSUED TO:

ISSUED BY:

Owner's Name

Krause Dealer

Mailing Address

City

City

State

State

Date of Purchase



# Warranty Policy

(Krause Serial Numbered Wholegoods purchased subsequent to 7/1/99)

Note: All warranty work must be accomplished by a Krause Corporation Authorized Service Center rated to perform maintenance on Krause Corporation Products.

## A. KRAUSE CORPORATION ("KRAUSE") LIMITED WARRANTY.

- (1) Subject to the limitations and conditions hereinafter set forth, Krause warrants, at the time of delivery by Krause to be free from (i) defects in materials or workmanship, and (ii) defects in design that in the view of the state of the art as of the date of manufacture should have been foreseen provided, however, that the defect must be discovered and reported to Krause within the periods specified as follows. For a period of one year all new serial numbered production agricultural units covered by this warranty; for a period of thirty-six (36) months the tongue weldment, center frame weldment, wing frame weldments, disc harrow gang bearings and K-Tine field cultivator shanks.
  - (2) Krause does not warrant disc blades, tires, chisel shanks, hydraulic cylinders, accessories and other parts not manufactured by it, but supplied with or as a part of its products. Krause will, however, obtain and pass on any adjustments provided by the manufacturers of such parts under these manufacturer's warranties.
  - (3) The entire extent of Krause's liability shall be limited to that of either reimbursing Buyer for its costs of purchasing a rebuilt, over-hauled or repaired part from either Krause or a proper Krause Authorized Service Center or, at Krause's election, reimbursing buyer for its costs of having the part repaired at a proper Krause Authorized Service Center. If Krause elects not to repair the part and if neither a rebuilt, over-hauled or repaired part is, in Krause's opinion, timely available then Krause will reimburse buyer for its costs of purchasing a new part from either Krause or a proper Krause Authorized Service Center. The labor necessary to remove from the product such part or parts and to install in the product such part or parts, as well as any repair made as the result of improper installations by Krause, shall be covered by this warranty, provided the work is performed at a proper Krause Authorized Service Center.★ If return of the defective part is required, it must be returned shipping prepaid to Krause. Krause's limited warranty will apply to any part repaired or replaced by a proper Krause Authorized Service Center pursuant to Krause's Limited Warranty: however, the applicable warranty for such part repaired or replaced shall be limited to the unexpired portion of Krause's Limited Warranty described in paragraph (1) or (2) above, as applicable. In other words, the warranty period of the part repaired or replaced does not start over from the date of reinstallation.
- ★[Krause Corporation will repair or replace, free of charge, any part of the product found to be defective, within the specified warranty periods, after an inspection of the part has deemed it to be defective. Inspection must be performed by an authorized agent of Krause Corporation, or returned to the Krause factory for inspection and disposition. Warranty labor will be considered during the first year of warranty only. Krause Corporation will establish and publish an hourly flat rate for shop labor and reimbursement during the first year of the warranty period. Krause Corporation does not allow credit for the cost of travel time, mileage or hauling as a warranty allowance. During the remaining second and third year, when applicable, Krause will repair or replace the defective part, without consideration of labor charges.]
- (4) Routine services (such as inspections, field settings, adjustments, etc.) and replacement of items which deteriorate from expected normal wear and tear or exposure (such as paint, tires, hoses, blades, sweeps, etc.) are not covered by this Limited Warranty. Such routine services and replacements required during the course of operation are not considered to be the result of any defect in the product.

## **B. LIMITATIONS APPLICABLE TO KRAUSE'S LIMITED WARRANTY.**

- (1) Krause will be relieved of all obligations and liability under this warranty if:
  - (i) The alleged defect in the part is due to misuse or neglect on the part of someone other than Krause;  
or
  - (ii) Krause's identification mark or name or serial number has been removed from the part in question;  
or
  - (iii) The product and/or equipment have not been maintained, operated or stored either in accordance with applicable manuals, communications or other written instructions of Krause or any manufacturer of the part involved, or in accordance with applicable regulations and advisory circulars unless buyer shows that such maintenance, operation or storage was not a contributory cause of the defect; or
  - (iv) The part in question has been modified or altered after delivery other than by the manufacturer or in accordance with a modification or alternation scheme approved in writing by the manufacturer; or
  - (v) The product is used for purposes other than conventional owner/operator usage. Usage not considered conventional owner/operator includes, but is not limited to, operation conditions that consist of rocks or other obstructions.
- (2) For the purpose of this Warranty, no part of the product or equipment will be regarded as breaching the limited warranty merely because, subsequent to its delivery, some modification or alteration becomes necessary for product improvements or in order to meet a change in the requirements of any applicable regulation.
- (3) TO THE EXTENT ALLOWED BY APPLICABLE LAW, BUYER WAIVES AS TO KRAUSE ALL OTHER WARRANTIES, WHETHER OF MERCHANTABILITY, FITNESS OR OTHERWISE, THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACT HEREOF.
- (4) TO THE EXTENT ALLOWED BY APPLICABLE LAW, THE OBLIGATIONS OF KRAUSE SET FORTH HEREIN SHALL BE THE EXCLUSIVE REMEDIES FOR ANY BREACH OF WARRANTY HEREUNDER, AND, TO THE SAME EXTENT, KRAUSE SHALL NOT BE LIABLE FOR ANY GENERAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY DAMAGES FOR DIMINUTION OF MARKET VALUE, LOSS OF USE OR LOSS OF PROFITS, OR ANY DAMAGES TO THE PRODUCT CLAIMED BY BUYER OR ANY OTHER PERSON OR ENTITY UPON THE THEORIES OF NEGLIGENCE OR STRICT LIABILITY IN TORT.
- (5) ANY ACTION BY BUYER FOR BREACH OF THIS WARRANTY BY EITHER KRAUSE OR SELLER MUST BE COMMENCED WITHIN (1) YEAR AFTER THE CAUSE OF ACTION ACCRUES.

# Establishing Customer Warranty

## Dealer's Obligation

1. It is the responsibility of the dealer to complete a **Delivery Report and Warranty Registration** form. The form should contain the model, serial number, delivery date, along with the complete dealer and customer address. This form must be signed by the dealer and customer upon physical delivery of the product to the customer. The dealer must complete the **pre-delivery check list** provided on the Delivery Report and Warranty Registration form.
2. Dealer will review the **Predelivery Check List** located in the front of the owner's manual with the customer and / or operator. This should be signed by the dealer at time of delivery to the retail customer.
3. The dealer will review the **Customer Review Sheet** located at the front of the owner's manual with the customer and / or operator. This should be signed by the dealer representative and the customer.
4. An authorized Krause dealer will submit **warranty claims** on behalf of the customer. All claims must be handled through the dealer. They will then be given to the Krause District Manager for inspection and approval. Warranty requests must be filed within 60 days from completion of the repair for consideration.
5. It is the dealer's responsibility to **service** the warranty on products sold through said dealership.

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

# Establishing Customer Warranty

## Customer's Obligation

1. The customer is responsible for reading the operator's manual supplied with each serial numbered unit. The manual describes the safe and correct operating procedures of the specific product. The operator's manual will also instruct the user on recommended lubrication and maintenance of the product.
2. The customer will advise the dealer of the anticipated start date of the product so a dealer representative can be on hand to make necessary field adjustments.
3. The owner is also responsible for inspecting the product during and after use. If a part has failed or is in need of repair, it should be replaced. When continued use of the product would result in excessive wear of other components, the part should be replaced before operation is continued. Continued use of the product may void warranty on other parts damaged from this condition. The user must make the machine available to the dealer for a warranty repair.
4. It is the customer's responsibility to deliver his machine to an authorized Krause dealer for completion of a warranty repair. If the dealer agrees to make a service trip to the customer's residence, it is an agreement between the dealer and the customer. Krause will not allow warranty credit for the cost of travel, mileage, or hauling.
5. Warranty labor consideration will only be given during the first year of warranty. Any labor charge for the 2nd or 3rd year on the limited warranty will be at the customer's expense.

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# 4700 SERIES HIGH RESIDUE ROW CROP CULTIVATOR DEALER PREDELIVERY CHECK SHEET

TO BE CHECKED BY DEALER

CUSTOMER \_\_\_\_\_ DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_

DEALER \_\_\_\_\_

ADDRESS \_\_\_\_\_

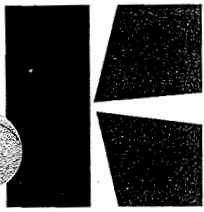
MODEL \_\_\_\_\_ SERIAL NUMBER \_\_\_\_\_

## DEALER CHECK:

1. \_\_\_ Row spacings of gangs are correct for row widths to be cultivated.
2. \_\_\_ Sweeps are set correctly and are the correct size.
3. \_\_\_ Down pressure spring adjustment set correctly. (Increased down-pressure behind tractor tires.)
4. \_\_\_ Tool bar gauge wheels have been assembled correctly.
5. \_\_\_ 3-Point hitch brackets are in the correct location and tightened properly.
6. \_\_\_ Attachments are installed correctly.
7. \_\_\_ Check to see that wing fold hydraulic cylinders are full of oil (air bled out of cylinders). Cylinders require 7 Quarts / 6.5 Liters of oil.
8. \_\_\_ Examine hydraulic hoses to see that they are protected from damage.
9. \_\_\_ Restrictors are installed in all wing lift cylinder ports.
10. \_\_\_ All decals are in place. See decal placement drawing on page P36.
11. \_\_\_ Customer review sheet is filled out and signed.
12. \_\_\_ Review lighting requirements. Light kits are standard.
13. \_\_\_ Check to see that the Owner's Manual is in the storage tube on the implement.
14. \_\_\_ Make sure that Slow-Moving-Vehicle emblem is clean and in place.

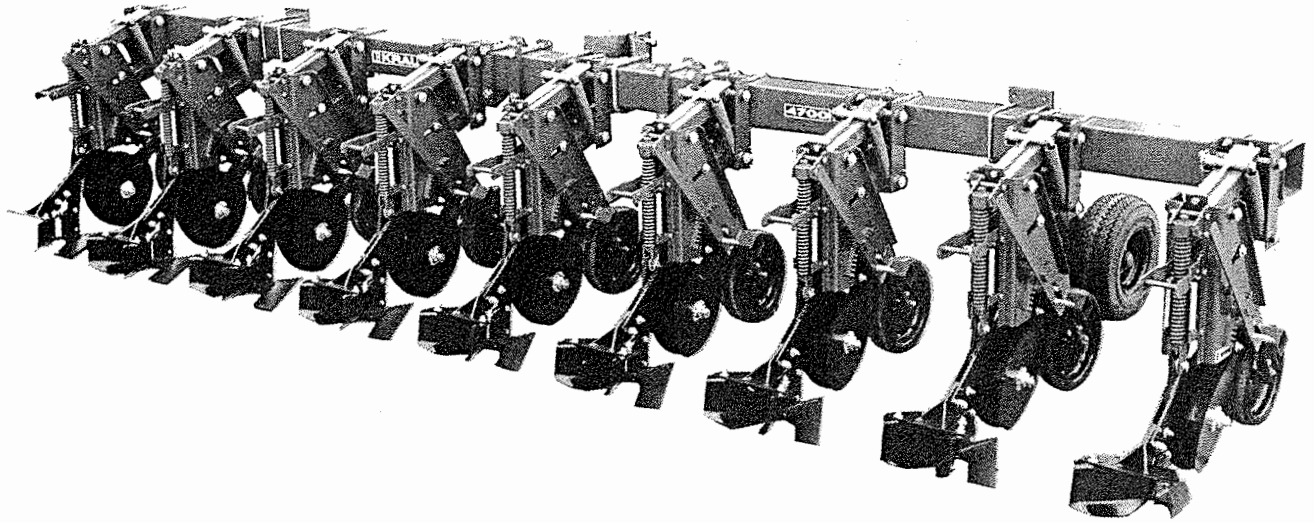
DELIVERED BY \_\_\_\_\_

DATE \_\_\_\_\_



**OWNER'S MANUAL**

APR 2000 **4700**  
**4730**  
**4750**



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## **4700 SERIES**

# **KRAUSE**

P.O. BOX 2707 / 305 SOUTH MONROE STREET

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Rev.:

ISSUED TO:

ISSUED BY:

Owner's Name

Krause Dealer

Mailing Address

City

City

State

State

Date of Purchase



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- (3) The entire extent of Krause's liability shall be limited to that of either reimbursing Buyer for its costs of purchasing a rebuilt, over-hauled or repaired part from either Krause or a proper Krause Authorized Service Center or, at Krause's election, reimbursing buyer for its costs of having the part repaired at a proper Krause Authorized Service Center. If Krause elects not to repair the part and if neither a rebuilt, over-hauled or repaired part is, in Krause's opinion, timely available then Krause will reimburse buyer for its costs of purchasing a new part from either Krause or a proper Krause Authorized Service Center. The labor necessary to remove from the product such part or parts and to install in the product such part or parts, as well as any repair made as the result of improper installations by Krause, shall be covered by this warranty, provided the work is performed at a proper Krause Authorized Service Center.★ If return of the defective part is required, it must be returned shipping prepaid to Krause. Krause's limited warranty will apply to any part repaired or replaced by a proper Krause Authorized Service Center pursuant to Krause's Limited Warranty: however, the applicable warranty for such part repaired or replaced shall be limited to the unexpired portion of Krause's Limited Warranty described in paragraph (1) or (2) above, as applicable. In other words, the warranty period of the part repaired or replaced does not start over from the date of reinstallation.

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  - (i) The alleged defect in the part is due to misuse or neglect on the part of someone other than Krause; or
  - (ii) Krause's identification mark or name or serial number has been removed from the part in question; or
  - (iii) The product and/or equipment have not been maintained, operated or stored either in accordance with applicable manuals, communications or other written instructions of Krause or any manufacturer of the part involved, or in accordance with applicable regulations and advisory circulars unless buyer shows that such maintenance, operation or storage was not a contributory cause of the defect; or
  - (iv) The part in question has been modified or altered after delivery other than by the manufacturer or in accordance with a modification or alternation scheme approved in writing by the manufacturer; or
  - (v) The product is used for purposes other than conventional owner/operator usage. Usage not considered conventional owner/operator includes, but is not limited to, operation conditions that consist of rocks or other obstructions.
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3. The dealer will review the **Customer Review Sheet** located at the front of the owner's manual with the customer and / or operator. This should be signed by the dealer representative and the customer.
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2. The customer will advise the dealer of the anticipated start date of the product so a dealer representative can be on hand to make necessary field adjustments.
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# 4700 SERIES HIGH RESIDUE ROW CROP CULTIVATOR DEALER PREDELIVERY CHECK SHEET

TO BE CHECKED BY DEALER

CUSTOMER \_\_\_\_\_ DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_

DEALER \_\_\_\_\_

ADDRESS \_\_\_\_\_

MODEL \_\_\_\_\_ SERIAL NUMBER \_\_\_\_\_

## DEALER CHECK:

1. \_\_\_ Row spacings of gangs are correct for row widths to be cultivated.
2. \_\_\_ Sweeps are set correctly and are the correct size.
3. \_\_\_ Down pressure spring adjustment set correctly. (Increased down-pressure behind tractor tires.)
4. \_\_\_ Tool bar gauge wheels have been assembled correctly.
5. \_\_\_ 3-Point hitch brackets are in the correct location and tightened properly.
6. \_\_\_ Attachments are installed correctly.
7. \_\_\_ Check to see that wing fold hydraulic cylinders are full of oil (air bled out of cylinders). Cylinders require 7 Quarts / 6.5 Liters of oil.
8. \_\_\_ Examine hydraulic hoses to see that they are protected from damage.
9. \_\_\_ Restrictors are installed in all wing lift cylinder ports.
10. \_\_\_ All decals are in place. See decal placement drawing on page P36.
11. \_\_\_ Customer review sheet is filled out and signed.
12. \_\_\_ Review lighting requirements. Light kits are standard.
13. \_\_\_ Check to see that the Owner's Manual is in the storage tube on the implement.
14. \_\_\_ Make sure that Slow-Moving-Vehicle emblem is clean and in place.

DELIVERED BY \_\_\_\_\_

DATE \_\_\_\_\_

# 4700 HIGH RESIDUE ROW CROP CULTIVATOR CUSTOMER REVIEW SHEET

CUSTOMER \_\_\_\_\_ DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_

DEALER \_\_\_\_\_

ADDRESS \_\_\_\_\_

MODEL \_\_\_\_\_ SERIAL NUMBER \_\_\_\_\_

1. \_\_\_\_ Owner's manual provided.
2. \_\_\_\_ Warranty card filled out.
3. \_\_\_\_ Review safety warnings and cautions as listed in this owner's manual.
4. \_\_\_\_ Review recommended maximum road speed and width for implement.
5. \_\_\_\_ Review the field operational speeds, horsepower, depth, and rock conditions.
6. \_\_\_\_ Explain the depth control system including how to set the individual gang gauge wheel and coulter.
7. \_\_\_\_ Explain that this unit will add a considerable weight to the rear of the tractor in the raised position. Sufficient front end ballast must be added to the tractor for safe operation. (See operating information under "PREPARING THE TRACTOR FOR OPERATION".)
8. \_\_\_\_ Explain the importance of maintaining the tool through proper lubrication, checking the bolts to see that they are tight, and through the replacement of worn or broken parts.
9. \_\_\_\_ Explain lighting requirements for your area.

DEALER \_\_\_\_\_ DATE \_\_\_\_\_

CUSTOMER \_\_\_\_\_ DATE \_\_\_\_\_

# Table of Contents

WARRANTY		GANG COMPONENTS COMMON TO 4700, 4730, 4750	P9
DEALER PREDELIVERY CHECK SHEET	1	DOUBLE COULTER, SHIELD, GUARD & SCRAPER	P10
CUSTOMER REVIEW SHEET	2	SINGLE COULTER ASSEMBLY	P11
TABLE OF CONTENTS	3	4700 SHANK & SPRING ASSEMBLY	P12
SPECIFICATIONS CHARTS	4	4750 SHANK, TRIP, LAY SHARE & FERTILIZER TUBE	P13
GENERAL INFORMATION PHOTOGRAPH	5	4730 AUTO-RESET TRIP SHANK ASSEMBLY	P15
<b>OPERATION SECTION</b>		4700 SWEEPS, RIDGING BLADES & FOOT PIECE	P16
SAFETY FIRST	O1	4700 POINT AND LAY SHARES	P17
SAFETY DECALS	O2	CUT-AWAY DISC ASSEMBLY (NARROW ROW)	P18
INFORMATIVE DECALS	O3	CUT-AWAY DISC ASSEMBLY (WIDE ROW MODELS)	P19
RESIDUE MANAGEMENT	O4	WHEEL BRACKET ASSEMBLY	P20
PREPARING THE TRACTOR	O4	OFFSET WHEEL ASSEMBLY	P21
PREPARING THE CULTIVATOR	O4	DISC SHIELD ASSEMBLY	P22
CATEGORY II & III HITCHES	O5, O6	REAR STABILIZER ASSEMBLY	P23
ATTACHING TO THE TRACTOR	O7	REAR WHEEL ASSIST ASSEMBLY	P25
Tractor Without Quick-Coupler	O7	LIFT ASSIST TRAIL HITCH 4716-301-0 ACCESSORY	P27
Tractor With Quick-Coupler	O7	TRAIL HITCH ASSEMBLY	P28
DETACHING FROM THE TRACTOR	O8	WING LIFT CYLINDER ASSEMBLY	P29
TRANSPORTING	O8	WING LIFT CYLINDER ASSEMBLY	P30
CULTIVATORS USING LIFT ASSIST WHEELS	O8	HYDRAULIC HOSE KITS FOR MODELS:	
4700 SERIES RECOMMENDATIONS	O9	4706-0F4, 4708-0F3, 4708-0F4, 4712-0F3, 4762-0F3	P31
AUTOMATIC WING LOCK	O11	4712-0F4, 4617-0F3	P32
GANG ADJUSTMENTS	O11	4" X 16" HYDRAULIC CYLINDER No Clevis	P33
Sweep Angle	O11	4" x 32" HYDRAULIC CYLINDER No Clevis	P34
COULTER DEPTH ADJUSTMENT	O12	4" X 24" HYDRAULIC CYLINDER	P35
SWEEP DEPTH ADJUSTMENT	O13	DECALS & REFLECTORS	P36
DOWN PRESSURE ADJUSTMENT	O13	LIGHT KITS	P37-P38
TOOL BAR BALLAST	O14	<b>ASSEMBLY SECTION</b>	
RIDGING BLADE ACCESSORY	O14	SAFETY & GENERAL ASSEMBLY INFORMATION	A1
CUT-AWAY DISC BLADE ACCESSORY	O15	MODEL NUMBER	A2
OFFSET WHEEL GROUP ACCESSORY	O16	3-PT HITCH	A2
DISC SHIELD ACCESSORY	O16	CASTOR WHEEL SPRING ASSEMBLY	A6
TRAIL HITCH ACCESSORY	O18	HINGE ASSEMBLY	A7
REAR STABILIZER ACCESSORY	O18	GANG AND SWEEP ASSEMBLY	A8
4700, 4730 & 4750 STABILIZATION	O19	PLACEMENT DRAWINGS FOR:	
REAR LIFT ASSIST WHEEL (OPTION)	O20	Rigid 4-Row, 6-Row, 8-Row	A10
FERTILIZER EQUIPMENT	O20	36", 38" & 40" 6-Row Folding, 30" 8-Row	A11
SERVICING	O20	36", 38" & 40" 8-Row Folding, 30" 12-Row	A12
General Maintenance	O20	36" & 38" 12-Row Folding	A13
Lubrication	O21	40" 12-Row Folding	A14
HYDRAULIC SYSTEM & SAFETY	O21	4750 SUBSOIL CULTIVATOR	A15
STORAGE	O22	GAUGE WHEEL BRACKET	A15
REPAIR PARTS	O22	CUT-AWAY DISC BLADE ACCESSORY	A16, A17
SUGGESTED REMEDIES SECTION	O23	DISC SHIELD ACCESSORY	A18
<b>PARTS SECTION</b>		RIDGING BLADE ACCESSORY	A20
4700 3-POINT HITCH (FOR 5 X 7 TOOL BAR)	P1	REAR STABILIZER ACCESSORY	A21
4700 3-POINT HITCH (FOR 7 X 7 TOOL BAR)	P2	TRAIL HITCH ACCESSORY	A22
4700 3-POINT HITCH (FOLDING MODELS)	P3	OFFSET WHEEL GROUP ACCESSORY	A22
4700 WING MODEL TOOL BARS	P4	HYDRAULICS	A23
4700, 4730, 4750 WING MODEL TOOL BAR	P5	AUTOMATIC WING LOCK, SMV BRACKET	A24
4750 3-POINT & 4750 RIGID TOOL BAR MODELS	P6	DECALS	A24
GAUGE WHEEL & TIRE ASSEMBLIES	P7	SMV BRACKET ASSEMBLY	A24
		LIGHT KIT INSTALLATION INSTRUCTIONS	A25-A26

# 4700 ROW CROP CULTIVATOR SPECIFICATION

12/94

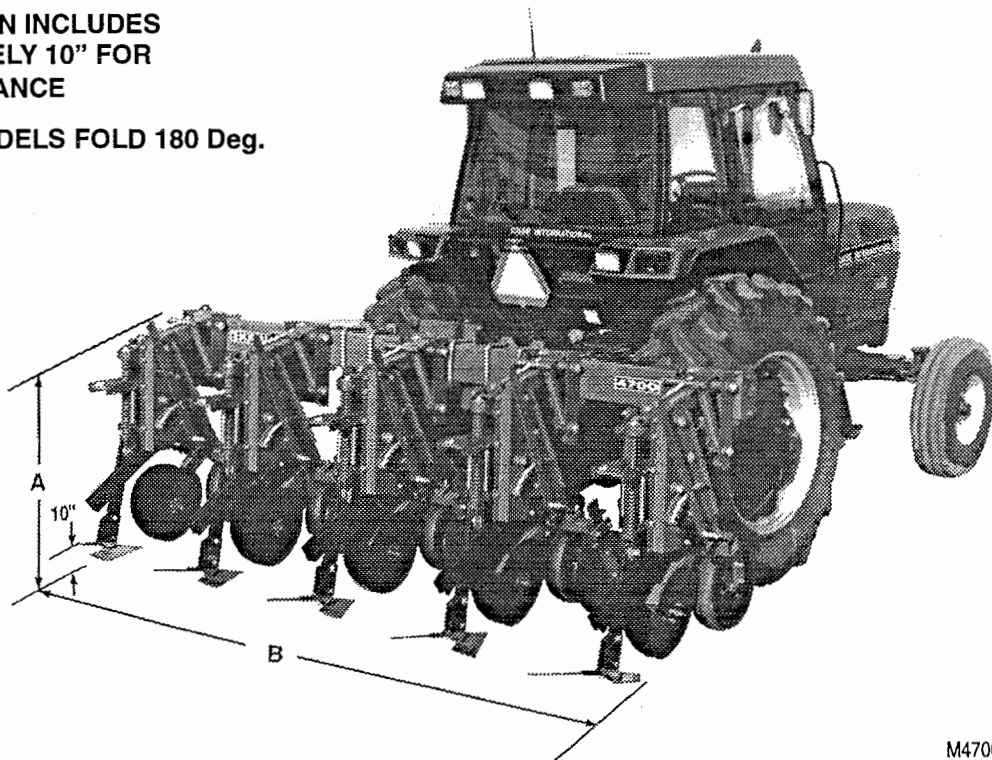
4700 MODELS	4730 MODELS	4750 MODELS	ROWS	SPACING	TOTAL GANGS	CENTER TOOL BAR	WING TOOL BAR LENGTH
4704-0R3	4734-0R3		4	28" - 30"	5	130"	———
4704-0R4	4734-0R4		4	36" - 40"	5	172"	———
4706-0R3	4736-0R3	4756-0R3	6	28" - 30"	7	190"	———
4706-0R4	4736-0R4	4756-0R4	6	36" - 40"	7	250"	———
4708-0R3	4738-0R3	4758-0R3	6	28" - 30"	7	250"	———
4708-0F3	4738-0F3		8	28" - 30"	9	139-1/4"	63-1/2"
4708-0F4	4738-0F4		8	36" - 40"	9	178-3/4"	77-1/2"
4712-0F3	4742-0F3	4762-0F3	12	28" - 30"	13	202-1/4"	87-1/2"
4712-0F4			12	36" - 40"	13	262-1/4"	114-1/2"
4716-0F3			16	28" - 30"	17	262-1/4"	114-1/2"

## TRANSPORT HEIGHT AND WIDTH

4700 MODELS	4700 MODELS	4750 MODELS	TRANSPORT HEIGHT "A"	TRANSPORT WIDTH "B"	
				Basic	w/ Disc Shields
4704-0R3	4734-0R3		5' 0"	11' 2-1/2"	11' 2-1/2"
4704-0R4	4734-0R4		5' 0"	14' 6-1/2"	14' 6-1/2"
4706-0R3	4736-0R3	4756-0R3	5' 0"	16' 2-1/2"	16' 2-1/2"
4706-0R4	4736-0R4	4756-0R4	5' 0"	21' 2-1/2"	21' 2-1/2"
*4706-0F4	4736-0F4		9' 0"	10' 11-1/4"	11' 7-1/2"
4708-0R3	4738-0R3	4758-0R3	5' 0"	21' 2-1/2"	21' 2-1/2"
*4708-0F3	4738-0F3		9' 0"	11' 10-3/4"	11' 10-3/4"
*4708-0F4	4738-0F4		9' 0"	15' 2-1/4"	16' 0"
*4712-0F3	4742-0F3	4762-0F3	9' 0"	11' 1-3/4"	17' 1-3/4"
*4712-0F4			9' 0"	22' 1-3/4"	22' 1-3/4"
*4716-0F3			9' 0"	22' 1-3/4"	22' 1-3/4"

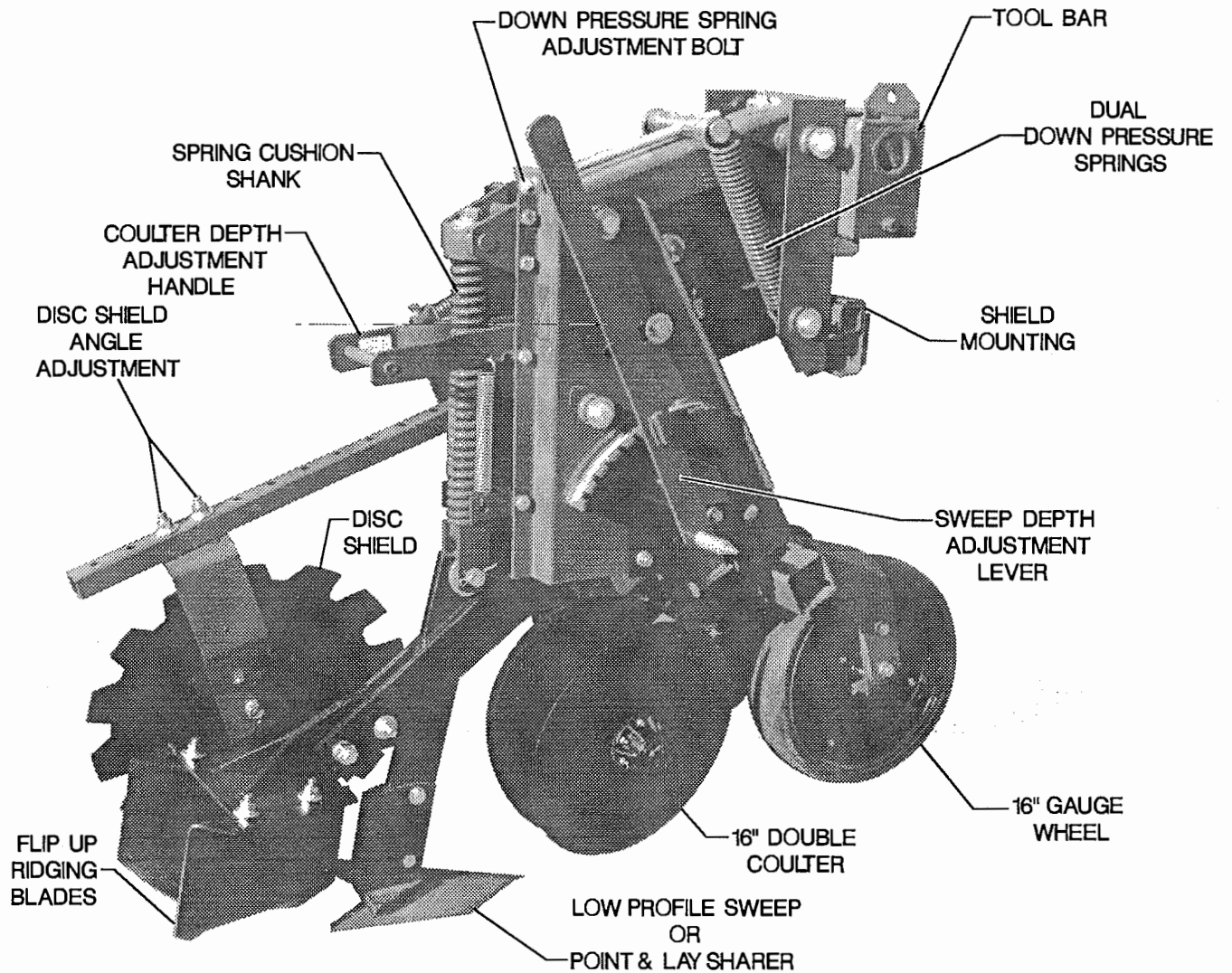
**NOTE: "A" DIMENSION INCLUDES APPROXIMATELY 10" FOR ROAD CLEARANCE**

**\* NOTE: ALL WING MODELS FOLD 180 Deg.**



M4700-1

# 4700 GANG ASSEMBLY



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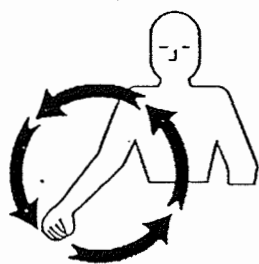
# **OPERATING SECTION**

# SAFETY ALERT SYMBOL

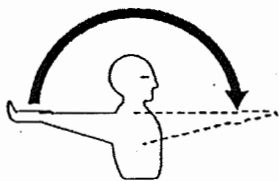


BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY.  
THIS SYMBOL IDENTIFIES IMPORTANT SAFETY MESSAGES.  
CAREFULLY READ THE MESSAGE THAT FOLLOWS.

## TEN MOST COMMON HAND SIGNALS USED IN THE FIELD



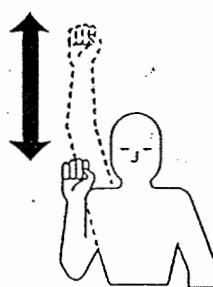
START  
THE  
ENGINE



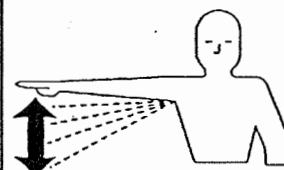
MOVE OUT  
OR  
TAKE OFF



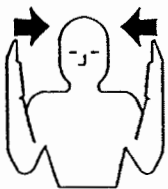
MOVE  
TOWARD  
ME



SPEED  
IT UP



SLOW IT  
DOWN



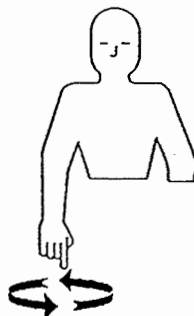
THIS FAR  
TO GO



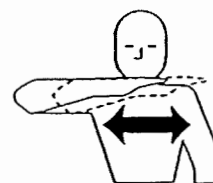
STOP



RAISE  
THE  
EQUIPMENT



LOWER  
THE  
EQUIPMENT



STOP  
THE  
ENGINE

# SAFETY FIRST



**WATCH FOR THIS SYMBOL AND CAREFULLY READ THE MESSAGE.**

1. Raise the cultivator with tractor hydraulics to remove pressure from the depth stops.
2. Read and understand the owner's manual before operating the machine.
3. Be sure safety decals and reflectors are clean and in place.
4. Do not climb or walk on gangs, frames, or tires.
5. Never position yourself under any portion of the implement unless the entire unit is lowered to the ground.
6. Stop engine and set parking brake before leaving the operator's position to adjust, lubricate, clean or unclog the machine.
7. Do not stand between the implement and the tractor unless the tractor brakes are locked and the engine is shut off.
8. Always store this implement with the wings down.
9. Never operate unit until hydraulic cylinders and lines are full of oil and free of air.
10. Use a Slow-Moving-Vehicle (SMV) emblem when transporting.
11. Do not road an implement over 15 miles per hour on the best surface conditions. Reduce speed when going up or down hills or when approaching ditches or corners.
12. Make sure there is sufficient ballast on the front of the tractor for safe operation. See "Preparing Tractor For Operation".
13. Make sure the wing and tool bar gauge wheels are assembled correctly to prevent possible interference with tractor cab or fenders.

Elimination of the hazards listed above should not be construed as providing guarantees that the equipment will meet or exceed all standards or regulations or will be completely safe to all personnel. The operator should inspect and review the implement after it is in his possession for adequacy in safety for the function for which it will be used.

# SAFETY DECALS

See page P36 for proper location on the implement.

## ⚠ WARNING

Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



INSPECT the hose assembly before each use.

REPLACE the hose assembly immediately if:

- The jacket of the hose appears abnormal.
- You have reason to believe it may be abnormal.
- There is any fluid leakage.
- The couplings are damaged.
- The hose is damaged or kinked.
- The reinforcement is visible through the jacket.

74-276

## ⚠ CAUTION

READ AND UNDERSTAND YOUR OPERATOR'S MANUAL! OBSERVE ALL CAUTION, WARNING & /OR DANGER INSTRUCTIONS AND OTHER SAFETY PRACTICES.

- Stop tractor engine and set hand brake before working on implement.
- Do not allow anyone to ride on implement. Do not allow anyone on tractor except operator.
- Make certain that everyone is clear before moving implement or activating any controls that may cause movement of implement, hydraulics, or any components.
- Operate with increased caution on slopes and near ditches where there is a possibility that the tractor or implement can overturn.
- Refer to tractor manual for addition of front weights to insure adequate steering control.
- Before transporting, clean off reflectors and make certain that SMV emblem is clearly visible.
- Maximum transport speed is 15 MPH on best road surface.
- Store with wings and implement on ground.
- Lower wings when working on or around implement.
- Regularly inspect bolts and pins in hitch, wheel hubs, cylinders and transport locks.

FAILURE TO OBSERVE SAFETY INSTRUCTIONS AND SAFETY PRACTICES CAN CAUSE PROPERTY DAMAGE, SERIOUS BODILY INJURY, &/OR DEATH.


74-258

## ⚠ WARNING

CYLINDERS MUST BE CHARGED WITH OIL BEFORE IMPLEMENT OR WINGS ARE LOWERED. LOWERING WITHOUT PURGING ALL AIR FROM THE HYDRAULIC CYLINDERS MAY RESULT IN PERMANENT AND EXTENSIVE DAMAGE.

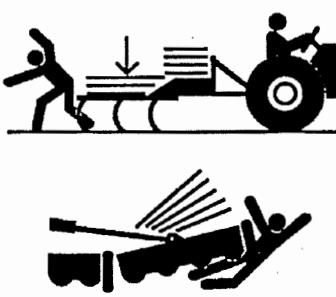
- Remove rod end pins from cylinders.
- Block up rod end of cylinder to allow freedom of movement while extending and retracting cylinder rod.
- Cycle cylinder sufficient times to remove all air.
- Reconnect cylinder rod end pin.

74-113

	CAUTION	INFLATION
	CHECK WHEEL BOLTS FREQUENTLY DURING INITIAL TRANSPORT AND OPERATION TORQUE TO 95 FT. LBS.	6 PLY -- 32 TO 34 PSI 8 PLY -- 38 TO 40 PSI 12 PLY -- 54 TO 58 PSI See manual for exact PSI

74-102

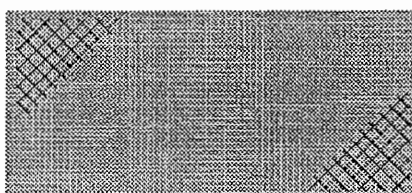
## ⚠ WARNING



FAILURE OF HYDRAULIC COMPONENTS OR ACCIDENTAL OPERATION OF HYDRAULIC CONTROLS CAN ALLOW IMPLEMENTS OR WINGS TO FALL AND CAUSE SERIOUS BODILY INJURY OR DEATH!

- Keep everyone clear when raising or lowering implement.
- Interference between tractor cab or fenders is possible. Stabilizer disc and tool-bar gauge wheels must be installed as shown in placement drawings. 3-Point arms must be adjusted downward until adequate cab and fender clearance is obtained.
- Make certain all hydraulic systems are full of oil and free of air before raising or lowering wings. Check operator's manual for detailed instructions.

74-260

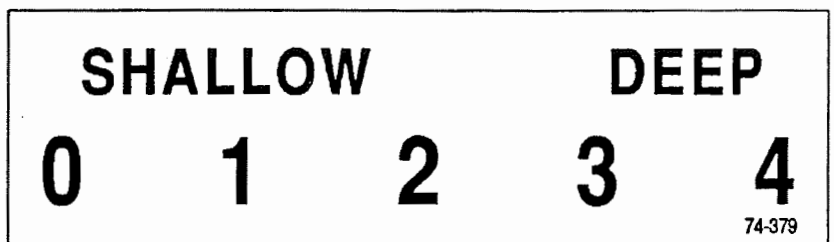
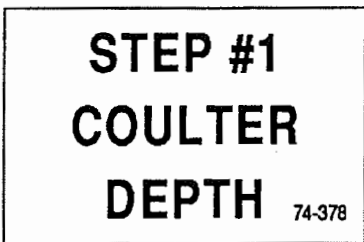
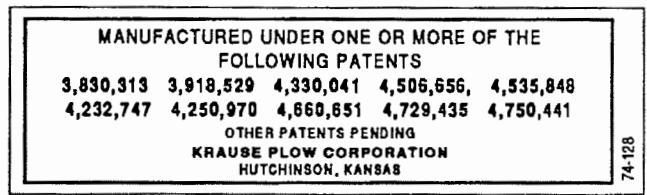


74-107 AMBER REFLECTOR



74-108 RED REFLECTOR

# INFORMATIVE DECALS



# OPERATING INSTRUCTIONS



READ ALL THE SAFETY DECALS ON THE IMPLEMENT AND REVIEW THE SAFETY FIRST SUGGESTIONS ON THE BACK OF THIS MANUAL TO REFRESH YOUR MEMORY. WATCH FOR THE SAFETY SYMBOL, AND READ THE INFORMATION THAT FOLLOWS. THIS IS FOR YOUR OWN PROTECTION.

## RESIDUE MANAGEMENT

Guidelines developed February 1992 by the S.C.S., U.S.D.A. and Equipment Manufacturers Institute show row cultivators leaving the following amount of residue after planting.

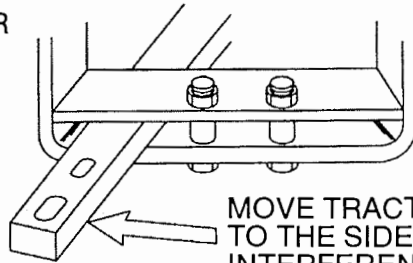
**EXAMPLE:** If you had 40% residue coverage after planting, you could expect to leave 75 to 90% of the non-fragile residue after one cultivation with a single sweep. In this case, 75% of 40% coverage would leave you with 30% coverage after cultivating. **NOTE:** The above figures are only guidelines; speed, depth and optional attachments will affect the amount of remaining residue by as much as 50% to 60%.

IMPLEMENT	PERCENT RESIDUE REMAINING	
	NON-FRAGILE	FRAGILE
Row Cultivators (30" and wider)		
Single sweep per row	75 - 90	55 - 70
Multiple sweeps per row	75 - 85	55 - 65
Ridge till cultivator (when using ridging blades)	20 - 40	5 - 25

## PREPARING THE TRACTOR FOR OPERATION

Read your tractor owner's manual. It will describe safe methods of operation. Make sure your tractor has proper added ballast, and that its hydraulic system is full of oil and working properly. Check tractor brakes and warning lights, and make sure that they are in working order.

**IMPORTANT:** THE 3-POINT MOUNTED CULTIVATOR WILL ADD A CONSIDERABLE AMOUNT OF WEIGHT BEHIND THE REAR AXLE OF YOUR TRACTOR. CALCULATE THE WEIGHT OF YOUR MODEL OF CULTIVATOR INCLUDING ALL ACCESSORIES. REFER TO YOUR TRACTOR OWNER'S MANUAL AND DETERMINE THE 3-POINT HITCH LIFT CAPACITY AND THE BALLAST REQUIRED FOR THE FRONT OF YOUR TRACTOR. ADD THE NECESSARY FRONT BALLAST AND CHECK THE INFLATION PRESSURES OF ALL TIRES ON THE TRACTOR BEFORE HITCHING TO CULTIVATOR.



M4700-5

Set the tractor wheels for the desired row spacing so the wheels are centered between the rows. Place the sway blocks in the widest setting to prevent cultivator side sway during transport.

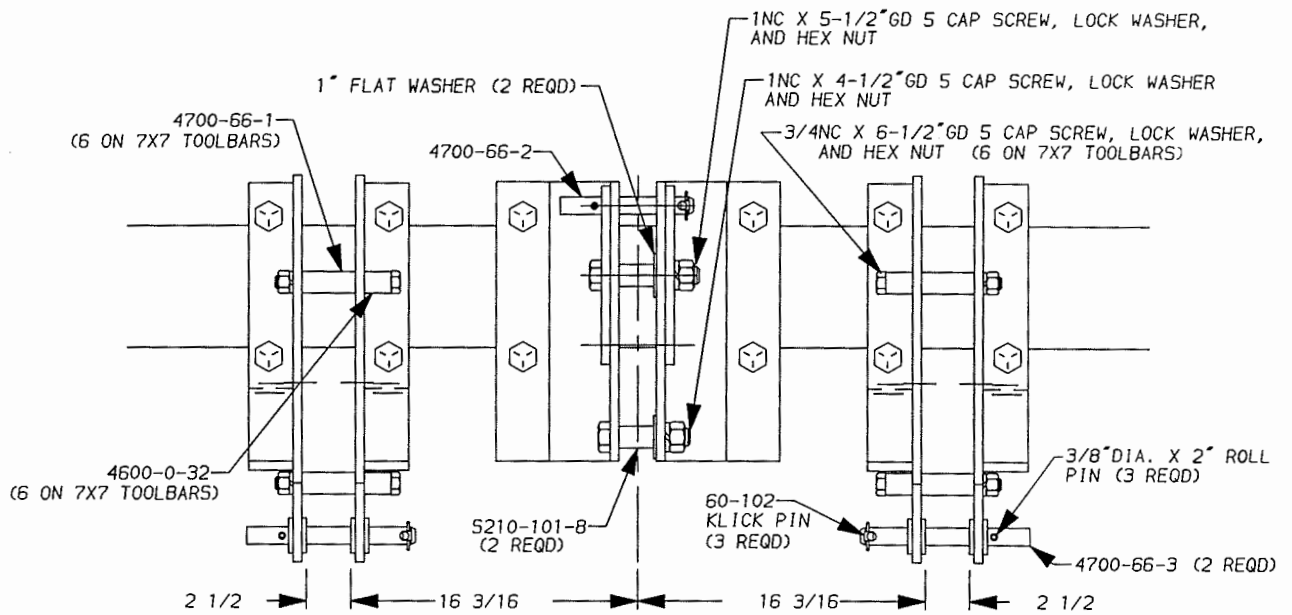
## PREPARING THE CULTIVATOR

Inspect all hardware on the cultivator. Make sure nuts and bolts have been tightened properly. See the recommended torque values on page opposite from A1 of this manual. If bolts show signs of wear, replace them with the same SAE grade bolt.

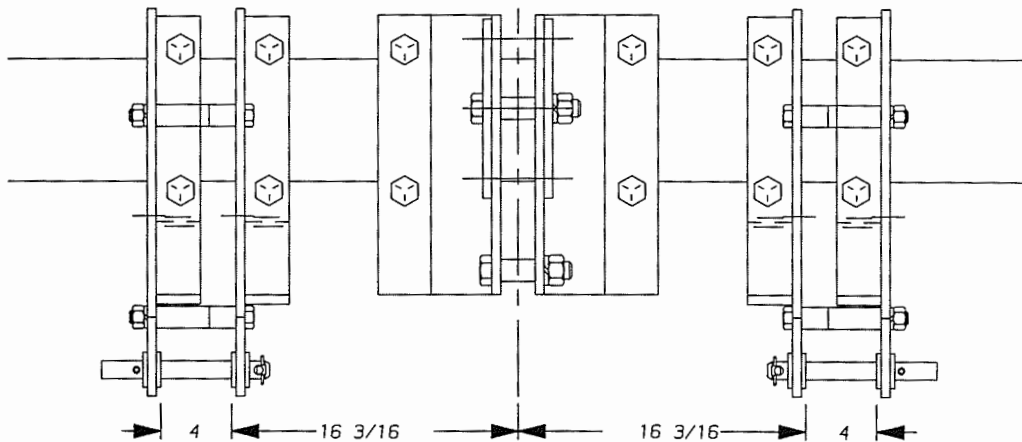
Before attaching the cultivator to tractor, be sure that the hitch pins and spacers are completely assembled to match the tractor. See page O5 and O6.

# CATEGORY II STANDARD AND QUICK HITCH

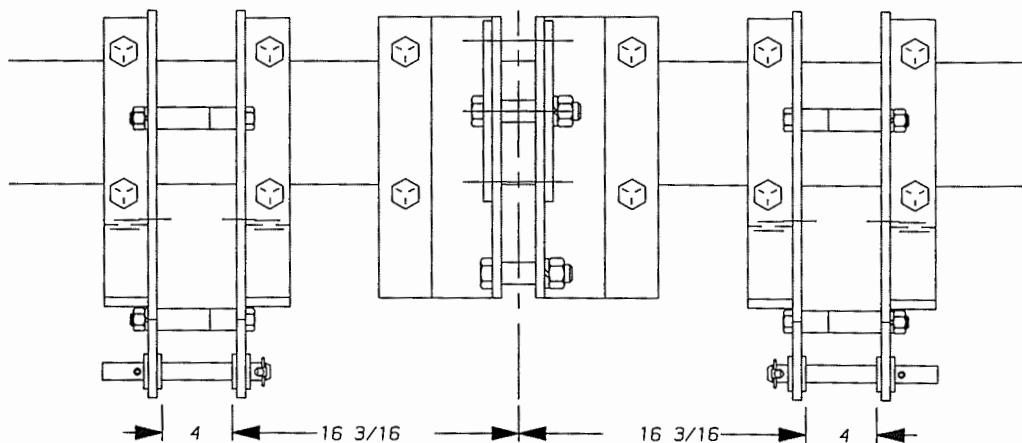
CAT. II, STD. 3 POINT 28", 30", 36", 38", & 40" SPACING



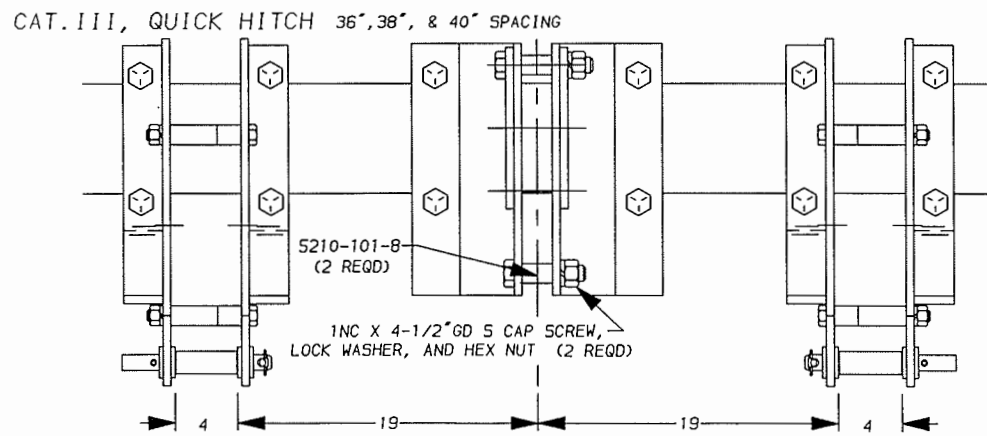
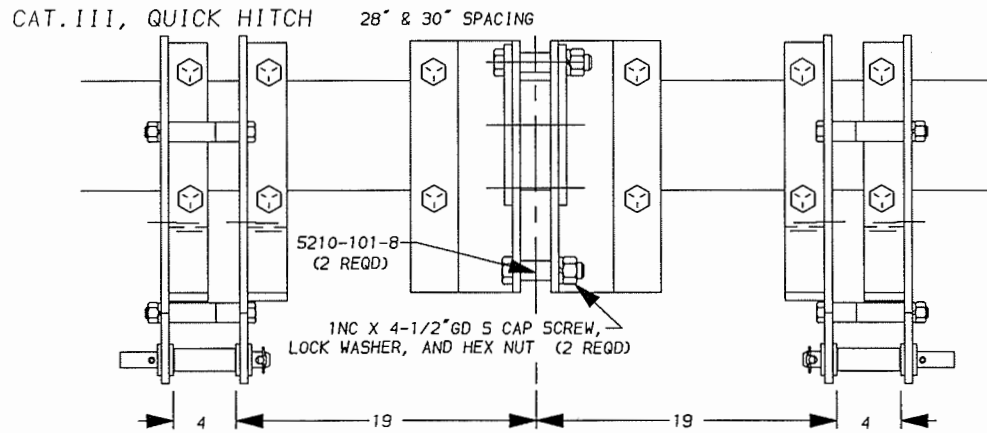
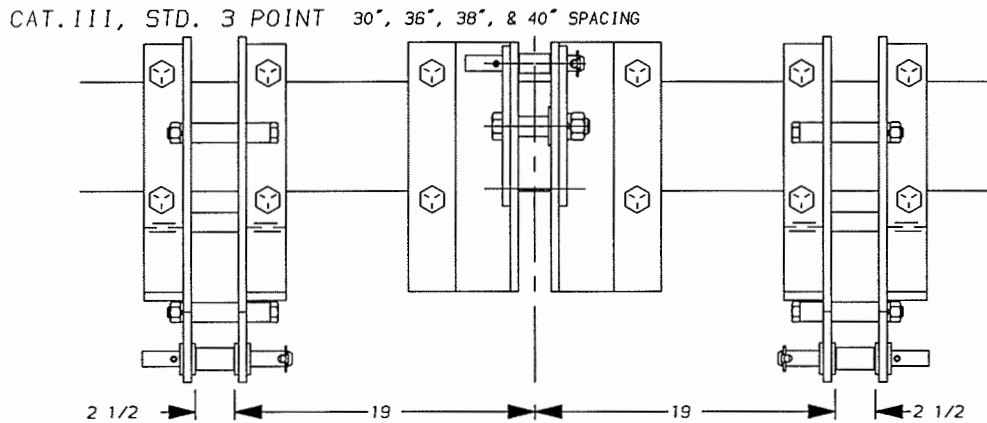
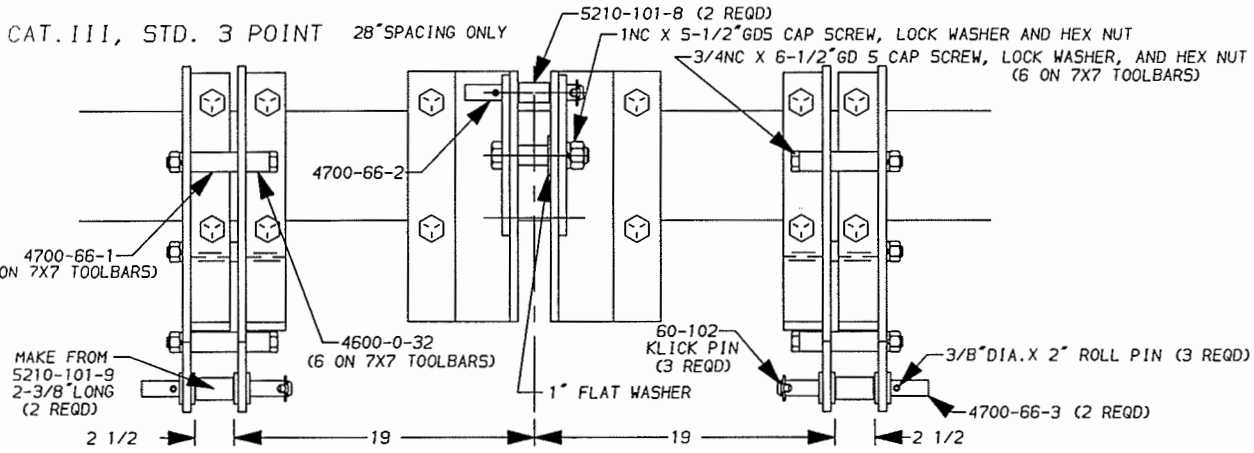
CAT. II, QUICK HITCH 28" SPACING ONLY



CAT. II, QUICK HITCH 30", 36", 38", & 40" SPACING



M4750-4  
REV. 5/97



M4700-7  
 REV. 5/97

## ATTACHING THE CULTIVATOR TO THE TRACTOR

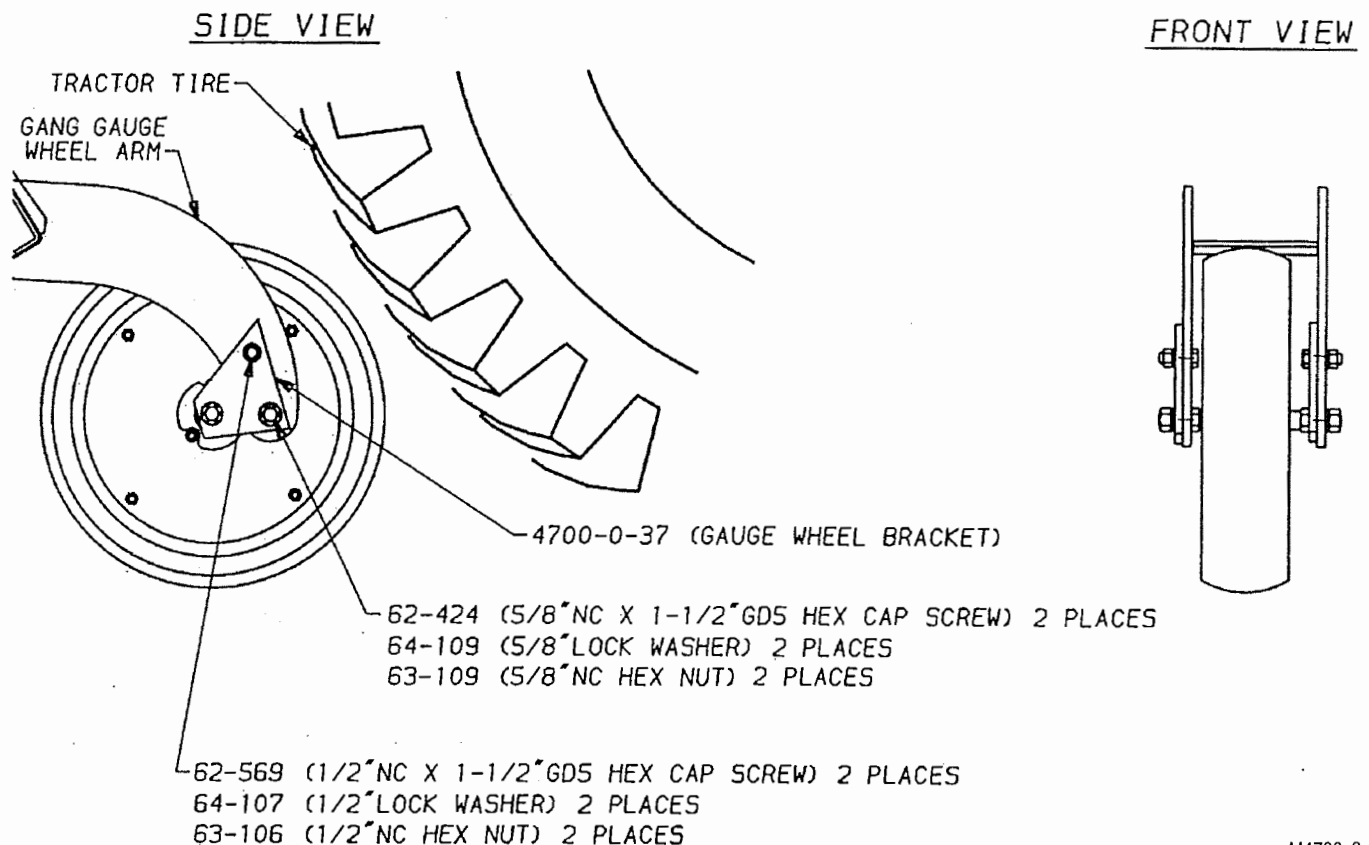
**⚠ Caution:** Do not allow any person to stand between the tractor and the cultivator while backing into position. Sudden loss of control could cause serious injury or death to a person caught between the tractor and cultivator. Tell your helper to wait until you give him the signal that the tractor is in park or neutral and that the hand brake is set and the engine is shut off.

### **Tractor Without Quick Coupler**

Back tractor and position the draft links in front of and in line with hitch pins. Stop engine and set brakes. Extend draft links and adjust length of lift links to enable installation of hitch pins. Install pins and secure with click pins. Adjust length of center link, and pin in place.

### **Tractor With Quick Coupler**

Lower coupler to allow jaws to pass under cultivator mast spacer and hitch pins. Back the tractor, raise coupler to firmly seat coupler jaws, then lock latch levers. Be sure the springloaded latches in the lower coupler jaws are extended above the hitch pins.



**SPECIAL NOTE:** Gauge wheel and tractor tire interference is possible in the raised position on some standard 3-Point tractors. This should be checked the first time the cultivator is hitched to the tractor. If this occurs, the Gauge Wheel can be moved back using (4700-0-37) brackets as shown. Enough parts for 2 gangs comes with each cultivator. A wheel bracket sack (4700-88-0) can also be ordered if 2 more gangs need to be changed.

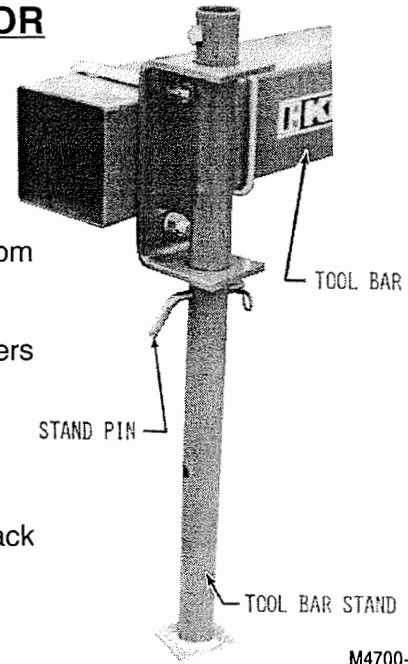
## DETACHING THE CULTIVATOR FROM THE TRACTOR

On the smaller cultivators that do not have disc tool bar gauge wheels, it is necessary to lower the tool bar stand (see photo to the right), and pin it into place before detaching the cultivator.

Lower cultivator onto a level surface. Loosen center link as necessary to remove load from the hitch. Release pressure from center link, and remove pin before removing lower hitch plates.

On Quick Coupler hitches, simply release Quick Coupler latch levers and detach tractor from the cultivator. Before detaching from wing model cultivators:

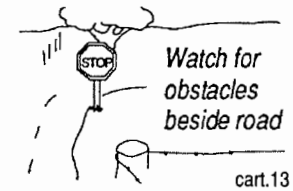
- a) Turn tractor off
- b) Release hydraulic pressure by moving the control levers back and forth
- c) Disconnect hydraulic hoses



## TRANSPORTING

**NOTE: An SMV emblem and a light kit were furnished as standard equipment with your implement. Make sure they are in place, clean and in working order.**

Use the ASAE Slow Moving Vehicle (SMV) emblem. The emblem is mounted point up in a plane perpendicular to the direction of travel  $\pm 10^\circ$ . It shall be placed centrally at the rear of the vehicle, unobscured, and 2' to 6' (0.61 to 1.8m) above the ground, measured from the lower edge of the emblem. The SMV emblem should be wiped clean before entering the road or highways. Comply with state and local laws pertaining to lighting and road widths. Turn on flashing lights whenever traveling on a highway except where prohibited by law. If the implement obscures the tractor warning lamp, a lamp must be added to the left of the implement. Transport during daylight hours only. Watch your clearance. Be aware of any obstacles along the side of the roadway that might be caught by the cultivator when passing by. Pull over to the side of the road to permit safe clearance for oncoming traffic. Keep the red and yellow reflectors clean and visible. Replace the reflectors if they become faded or damaged. Watch for any pedestrians on the side of the road that need to be warned of your presence.



**⚠ Danger:** Always check conditions of 3-Point hitch pins and bolts before transporting the implement. Do not road cultivator over 15 m.p.h. on the best surface conditions. Reduce speed when going up or down hills or when approaching ditches or corners.

## CULTIVATORS USING LIFT ASSIST WHEEL

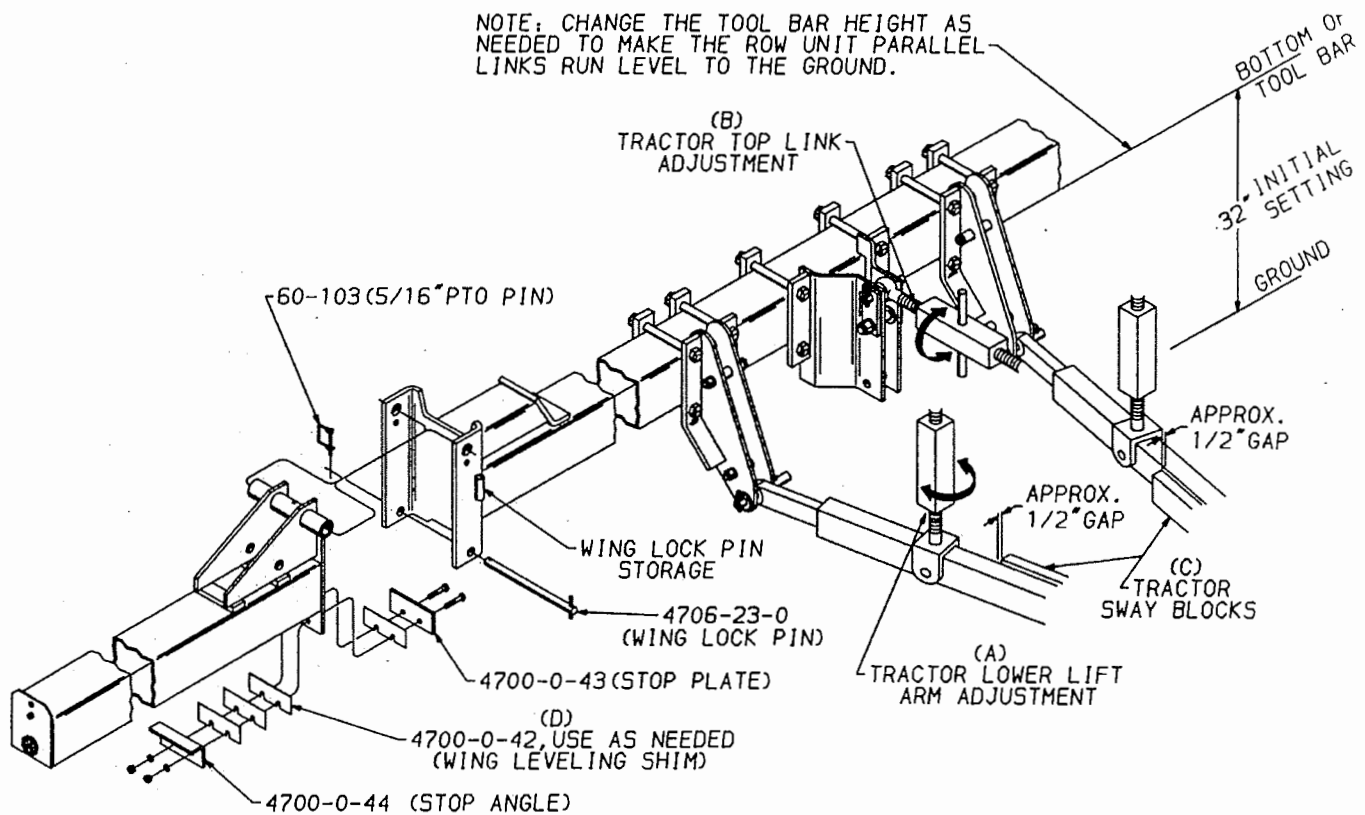
Always check the tire pressure before transporting and look for damaged tires. Wobble the tire from side to side. If excessive play is noted, adjust the hub spindle nut before roading to prevent damage to the hub or bearings.

**⚠ Caution:** It is very important to check wheel lug bolts after the first half mile of initial transport (delivery). If loose, tighten to 90 to 95 Ft. Lbs. torque. Continue to check frequently until they remain firmly seated.

## RECOMMENDATIONS FOR 4700 HIGH RESIDUE ROW CROP CULTIVATOR

<b>FIELD SPEEDS</b>	6 to 7 MPH for best performance. Reduce speed to 4 or 5 in rocky conditions.	
<b>SWEEP SIZES</b>	30" Row Spacing	20" Sweeps or 19" Lay Share (early cultivation)
		18" Sweeps or 19" Lay Share + cut-away blades (early cultivation)
	36" Row Spacing	24" Sweeps or 25" Lay Share + cut-away blades (early cultivation)
		24" Sweeps or 25" Lay Share w/o cut-away blades (late cultivation)
38" Row Spacing	24" Sweeps or 25" Lay Share + cut-away blades (all cultivation)	
<b>CUT-AWAY DISC ACCESSORY</b>	Recommended for all wide row spacing cultivators for increased tilled width between the rows	
	Recommended for all row spacing cultivators when close cultivation around small plants is desired	
	Recommended as a way to apply liquid fertilizer close to the row.	
<b>RIDGING BLADE ACCESSORY</b>	Recommended for all ridging applications	
	Especially recommended for flood irrigation	
<b>SHIELD ACCESSORY</b>	Disc Shields	Recommended for small plant protection
		Recommended for feathering soil around taller plants
		Will assist in forming ridges
	Can be used to close and seal behind anhydrous fertilizer knife	
Stationary Flat Shields	Discouraged in high residue conditions because static shields may contribute to plugging	
Tunnel Shields		
<b>OFFSET GAUGE WHEEL ACCESSORY</b>	Recommended on end gangs to maintain desired depth on second pass through when the gang gauge wheel is running in soft dirt	
	Recommended for use with cut-away disc blades if plugging occurs on guess rows.	
<b>REAR STABILIZER COULTER ACCESSORY</b>	Recommended if soil conditions vary enough that the cultivator tends to wander from side to side	
	Recommended if the tractor is equipped with 3-Point guidance system that corrects by moving the lower hitch points forward or backward	
<b>TOOL BAR GAUGE WHEEL ACCESSORY</b>	Use as needed to carry tool bar at consistent height	
<b>LIFT ASSIST WHEEL ACCESSORY</b>	Recommended for Models 4712-0F4 and 4716-0F3	
	Recommended for smaller wing models if the tractor is not large enough to be stable in transport	

## TOOL BAR AND 3-POINT ADJUSTMENTS

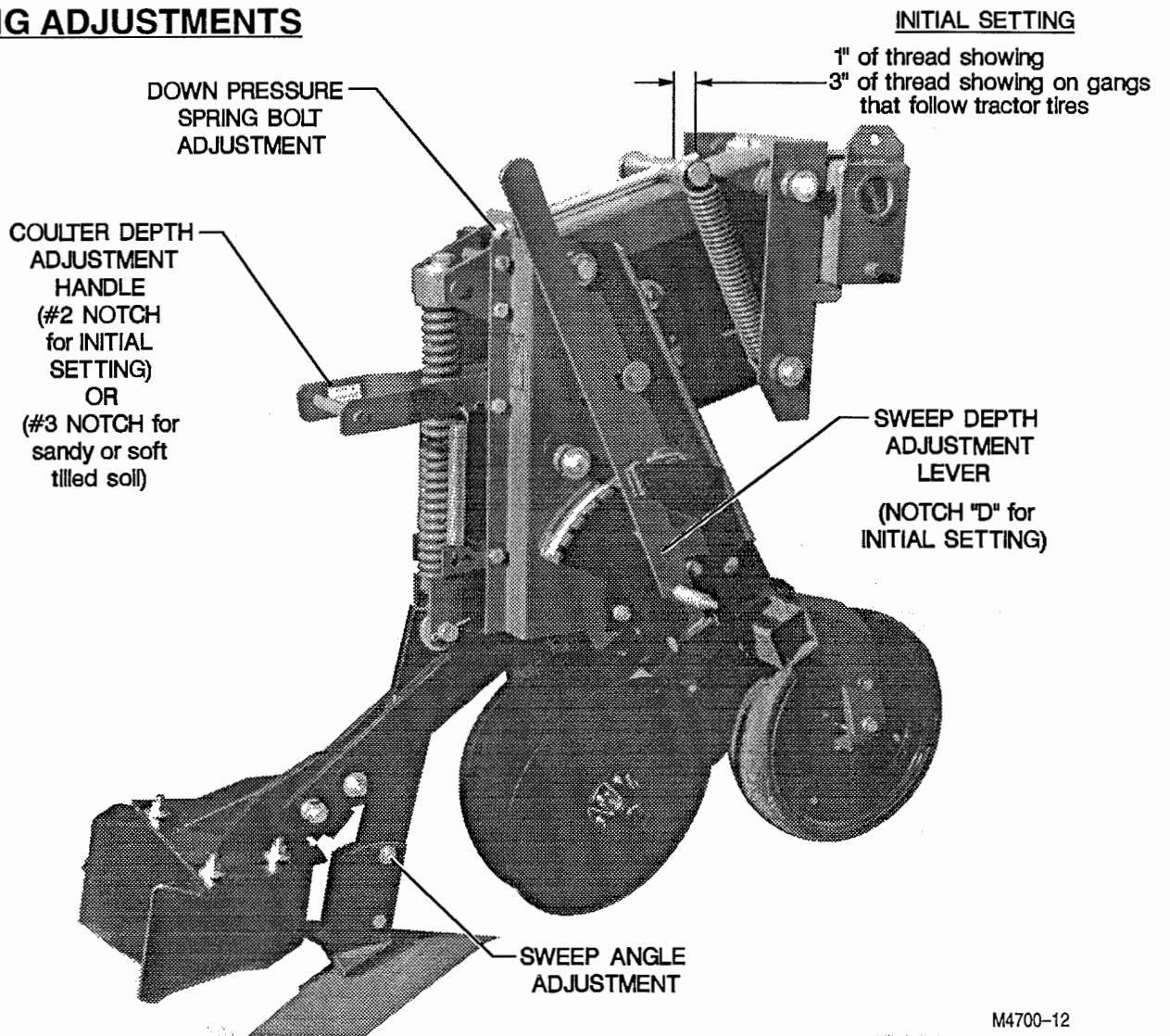


M4700-10

- Raise the cultivator with tractor hydraulics to remove pressure from the depth stops.
- Adjust the tractor lower lift arm until the center tool bar is level from side to side. Set the tractor depth stop so that there is 32" between the tool bar frame and the ground.
- Adjust the tractor top link until the tool bar is level from front to rear.
- Check the tractor sway blocks and set them so that there is approximately 1/2" of gap.
- On wing model tool bars, the wings can be aligned with the center tool bar by adding or removing shims at the hinges.

NOTE: Wing lock pins have been provided to lock the wings in field position. These pins are not necessary unless the wings want to come up due to high down pressure spring settings on the wing gangs.

# GANG ADJUSTMENTS

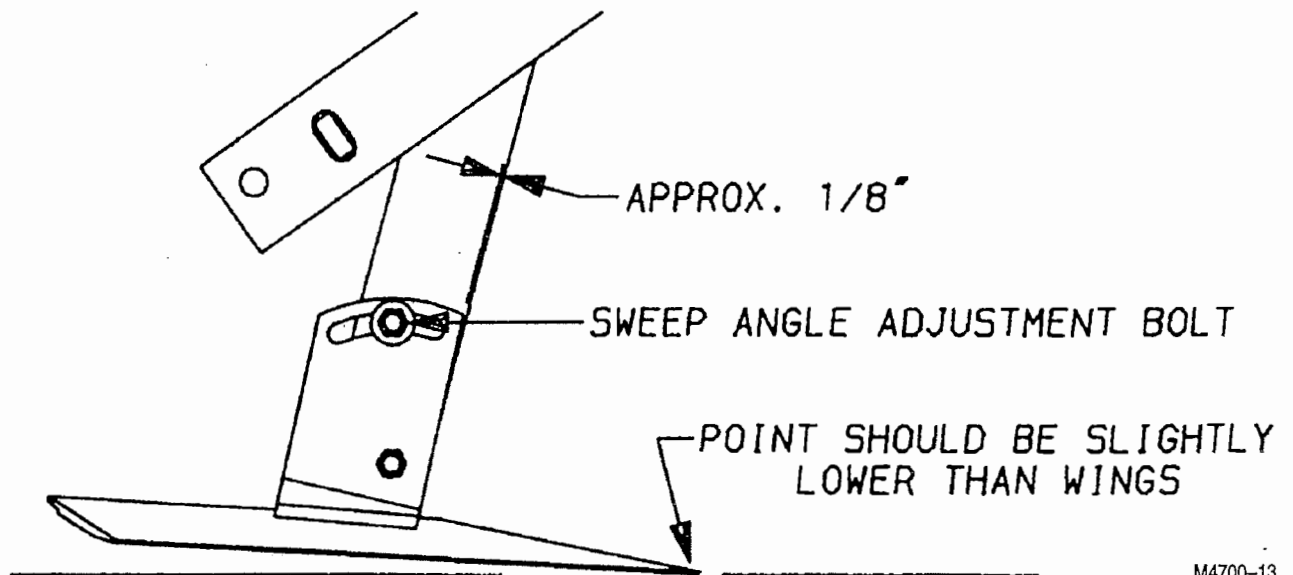


M4700-12

## Sweep Angle

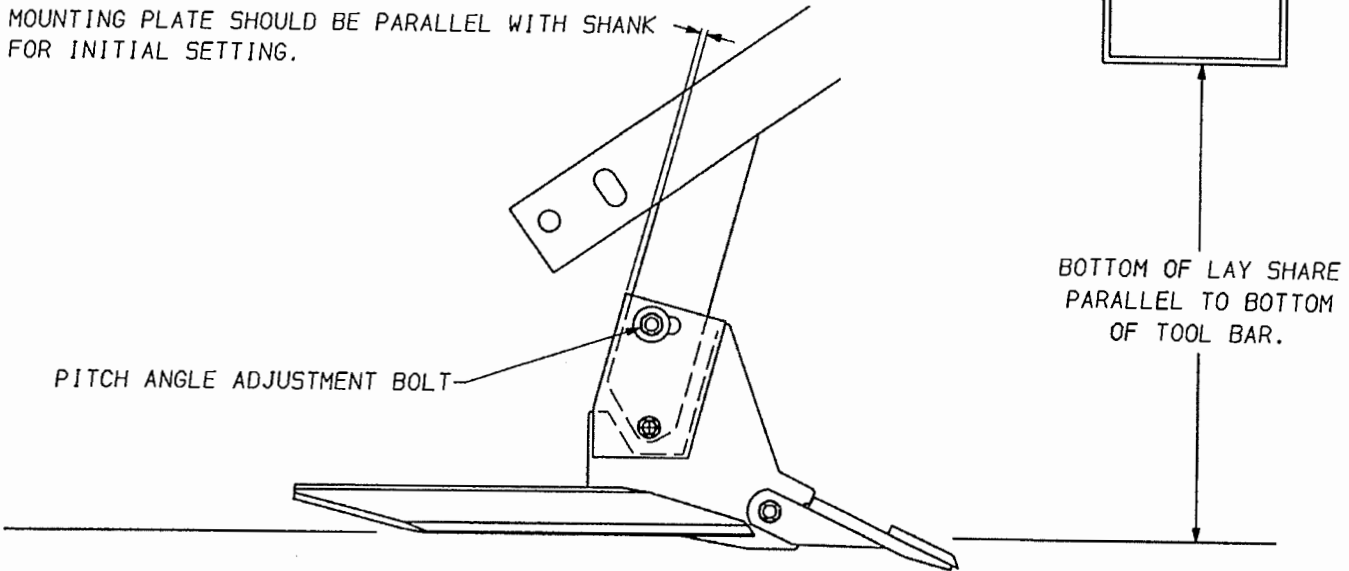
Adjust the sweep angle so that the point is slightly lower than the wings.

See the illustration below.



M4700-13

MOUNTING PLATE SHOULD BE PARALLEL WITH SHANK FOR INITIAL SETTING.



POINT & LAY SHARE

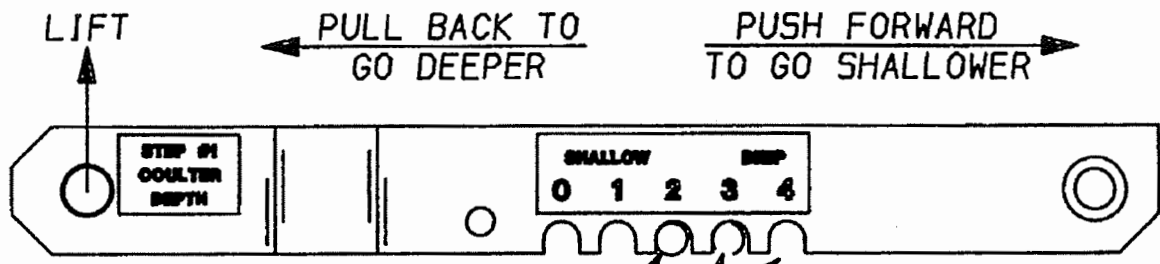
M4700-14

**COULTER DEPTH ADJUSTMENT**

The coulters depth can be adjusted by lifting the handle and PULLING BACK to go deeper, or PUSHING forward to go *shallower*.

Sandy or soft previously tilled soil may require a deeper coulters setting for good trash cutting performance.

The coulters depth range is from 0" to 4" deep.



RECOMMENDED SETTING FOR AVERAGE SOIL

RECOMMENDED SETTING FOR SANDY OR SOFT PREVIOUSLY TILLED SOIL

**IMPORTANT:**

THE COULTER DEPTH SHOULD BE SET BEFORE THE SWEEP DEPTH.

THE COULTER DEPTH IS NOT AFFECTED BY CHANGING THE SWEEP DEPTH; HOWEVER, THE SWEEP DEPTH DOES CHANGE WHEN THE COULTER DEPTH IS CHANGED.

M4700-15

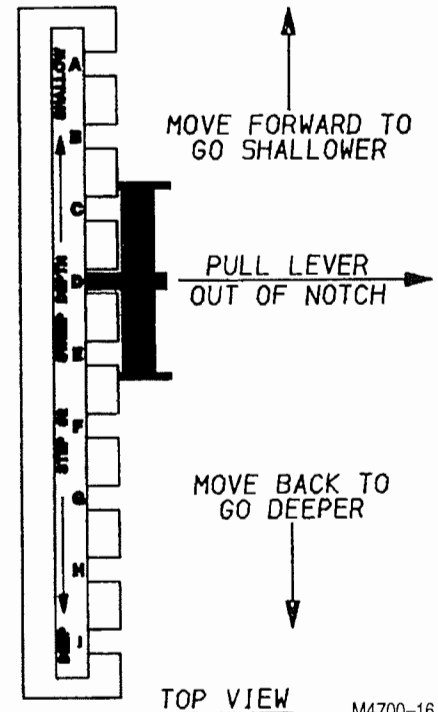
## SWEEP DEPTH ADJUSTMENT

The sweep depth can be changed by pulling the ADJUSTMENT LEVER out of the notch and moving it back to go deeper, or moving it forward to go shallower.

A shallow sweep depth should result in better weed kill.

### SWEEP DEPTH RANGE AT EACH COULTER SETTING

		COULTER DEPTH SETTING				
		0	1	2	3	4
Low Profile Sweep Depth Setting	A ↑	+ 1-1/2"	+ 1"	+ 1/4"	- 1/2"	- 1-1/2"
	I ↓	- 2-1/4"	- 3-1/4"	- 4"	- 4-1/2"	- 5-3/4"



M4700-16

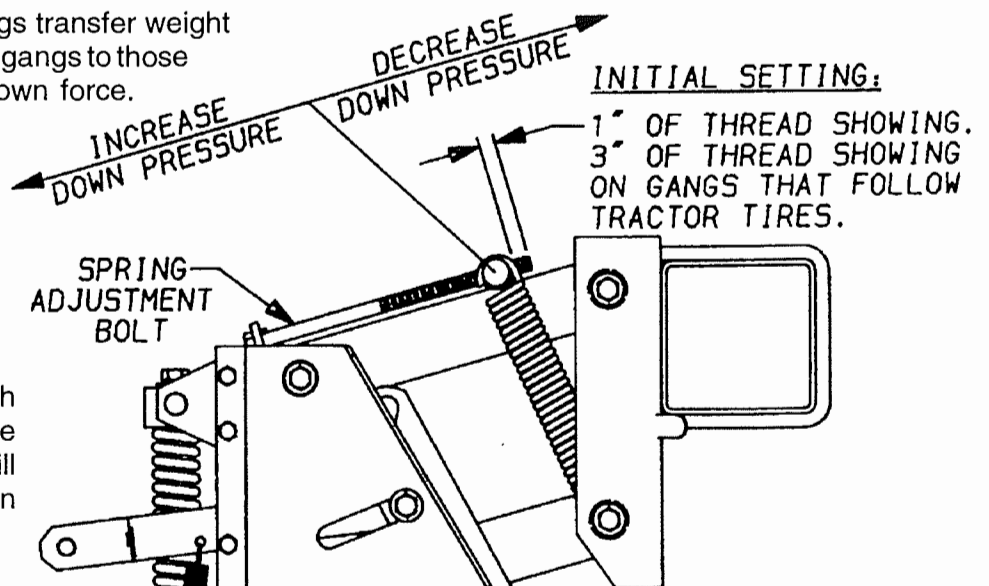
### LAY SHARE DEPTH RANGE AT EACH COULTER SETTING

		LAY SHARE DEPTH SETTING				
		0	1	2	3	4
Lay Share Depth Setting	A ↑	0"	- 1"	- 1-1/4"	- 2"	- 3"
	I ↓	- 3-3/4"	- 4-3/4"	- 5-1/2"	- 6"	- 7-1/4"

## DOWN PRESSURE SPRING ADJUSTMENT

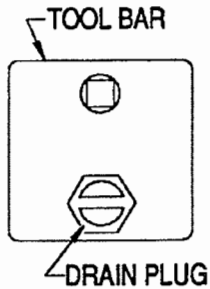
The down pressure springs transfer weight from the toolbar and other gangs to those gangs that need more down force.

Usually the gangs that follow the tractor tires require additional down pressure due to the compacted soil. NOTE: Down pressure should only be increased on the gangs that really need it. If a high amount of spring pressure is used on all gangs, it will decrease the effect on those gangs that really need it.



M4700-17

## TOOL BAR BALLAST

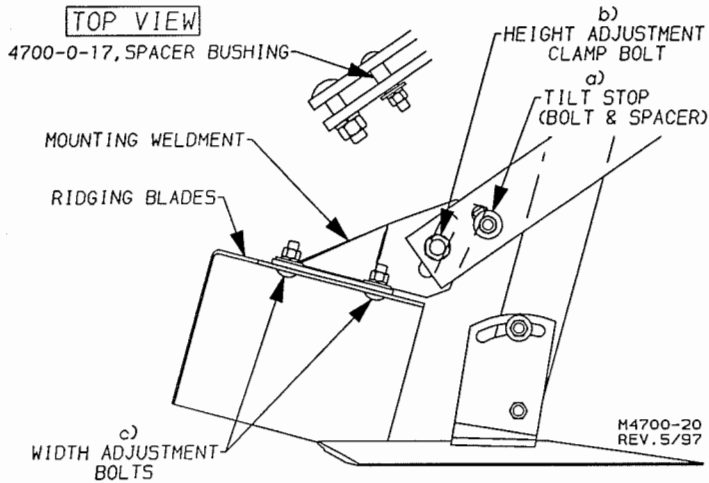


M4700-18

Extra tool bar weight is not usually necessary for the cultivator to operate properly; however, liquid can be added to the tool bar if needed.

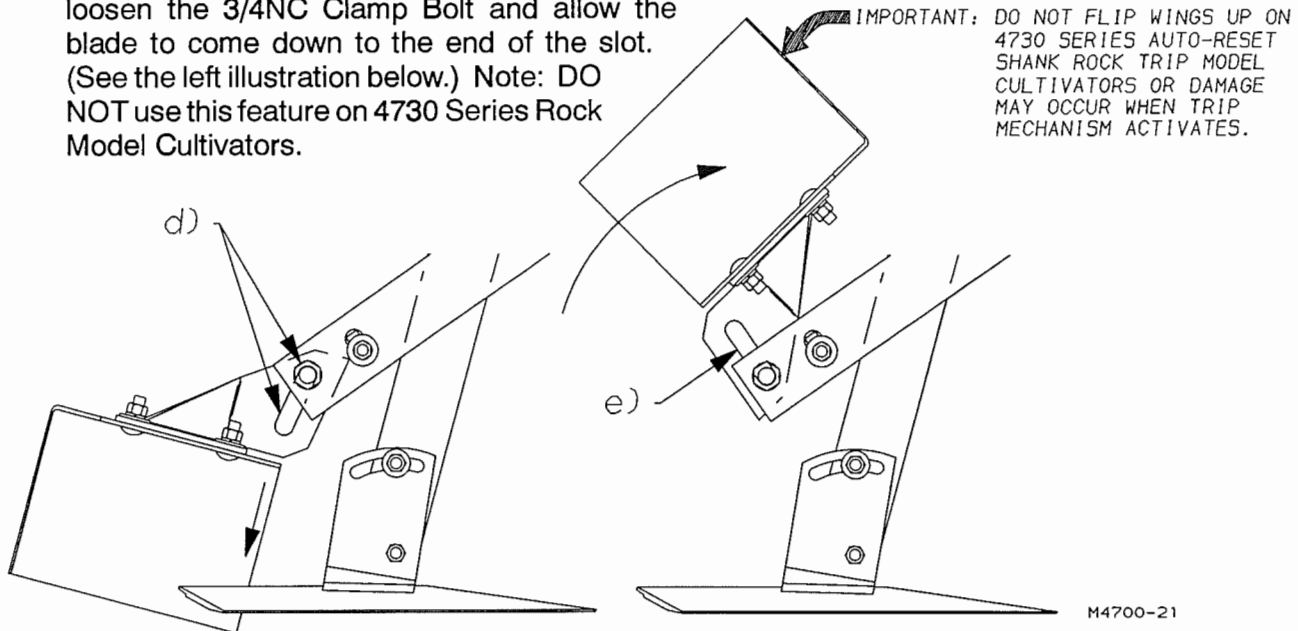
## RIDGING BLADE ACCESSORY

The Krause ridging blade is designed to allow some soil to move under the blades which reduces clod size; forming a better ridge.



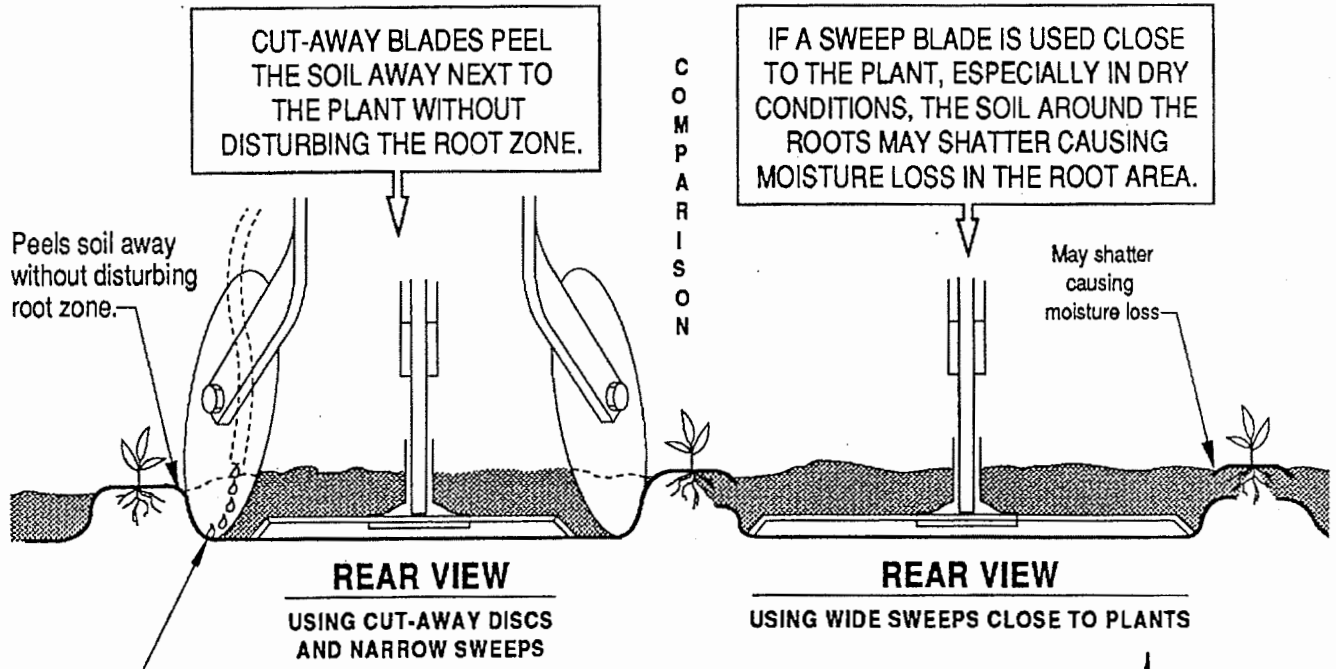
- The blade tilt stop (bolt and spacer) is used to set the amount of tilt desired. This stop also helps in resetting the ridging blades when returning from the flip up position. For initial setting, tighten the stop spacer in the lower end of the slot.
- Loosen the 3/4NC Bolt and slide the mounting Weldment up or down to adjust blade height. For initial setting, the top of the Mounting Weldment should be slightly above the tilt stop spacer.
- When setting the width adjustment bolts, the front end of the blades should be completely together and in line with the shank.

- To flip up the ridging blade when not in use, loosen the 3/4NC Clamp Bolt and allow the blade to come down to the end of the slot. (See the left illustration below.) Note: **DO NOT** use this feature on 4730 Series Rock Model Cultivators.



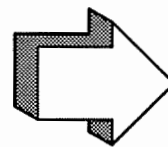
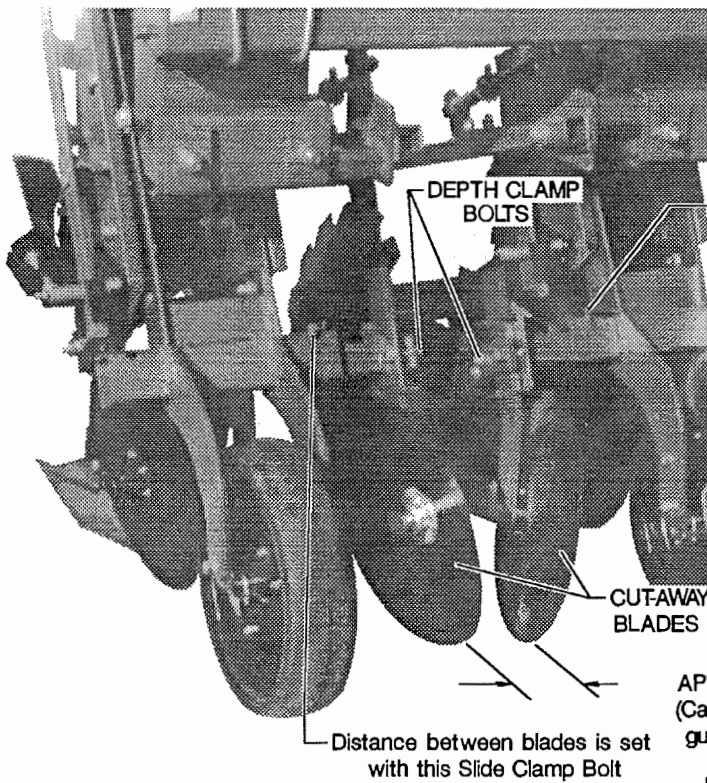
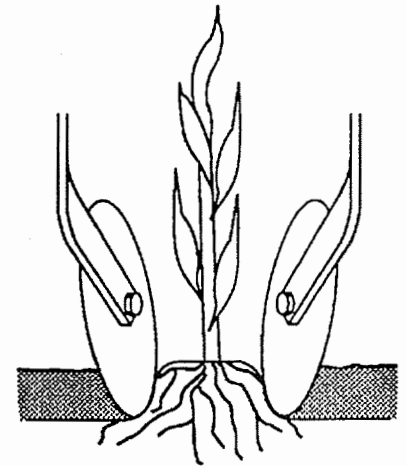
- Rotate the blade assembly up and then retighten the clamp bolt. (See the drawing at left.)

# CUT-AWAY DISC BLADE ACCESSORY



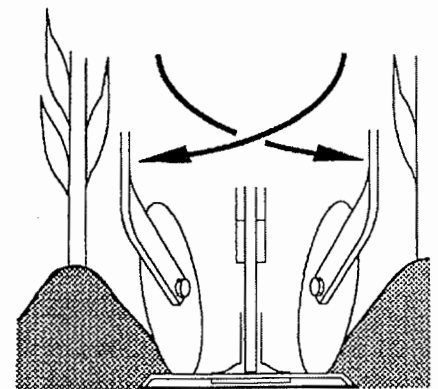
Cut-away disc blades also provide a good place to apply liquid fertilizer. Fertilizer is placed in the pocket next to the roots and the sweep blade then covers it with loose dirt.

Cut-away disc blades should be used on all row spacings, when close cultivation around small plants is desired.



**IMPORTANT:** As the crop gets taller, check root spread and depth before running blades close to the row.

APPROX. 7" APART  
(Can be closer with guidance system)



**FRONT VIEW**

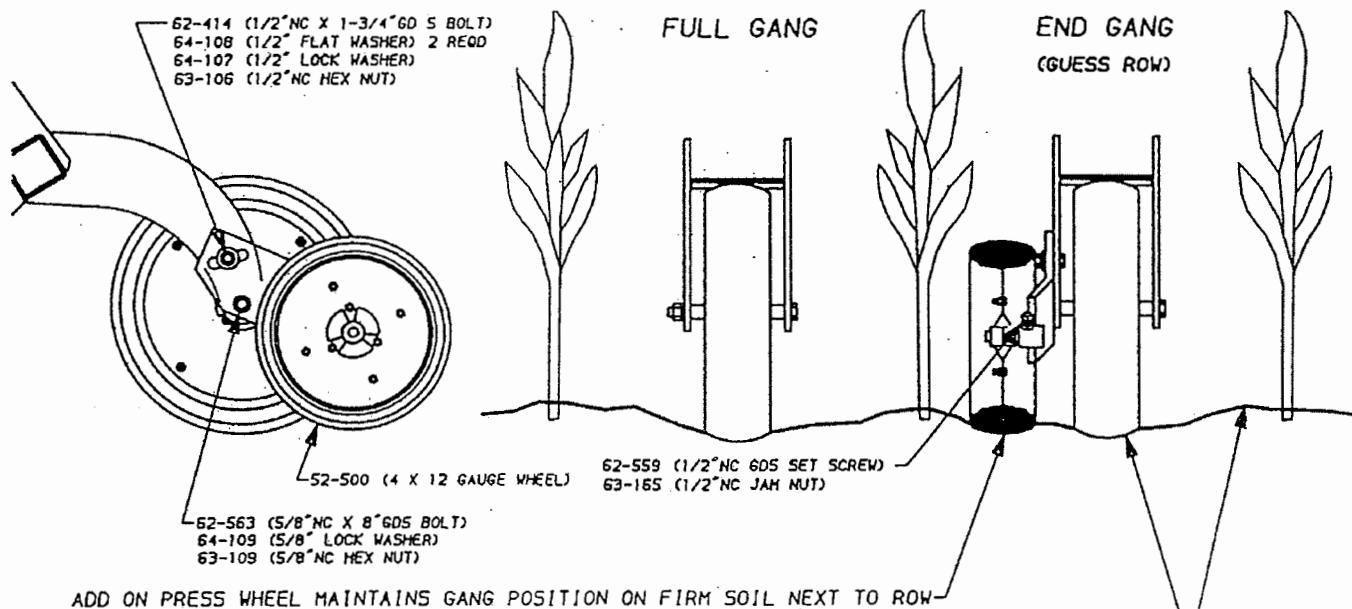
M4700-22 **REAR VIEW**

## OFFSET WHEEL GROUP — ACCESSORY

The OFFSET – GAUGE WHEEL is used to maintain the desired cultivator sweep depth on the half row (guess row) gangs.

The 4 x 16 GAUGE WHEEL is operating in soft soil on the return pass through the field. The wheel sinks in and the cultivating depth increases. The OFFSET – GAUGE WHEEL is added to the inside of the half-row gang gauge wheel. The add on gauge wheel operates in firm soil next to the row which enables the gang to operate at a more consistent depth.

The accessory is recommended for use with CUT-AWAY DISC BLADES if plugging problems ever occur on the half rows. The add on gauge wheel prevents the gang from operating too deep. If the CUT-AWAY DISC operates too deep, the massive amount of residue flow can cause the gang to plug.



SOFT GROUND ON SECOND PASS THROUGH THE FIELD

M4700-24

## DISC SHIELD ACCESSORY

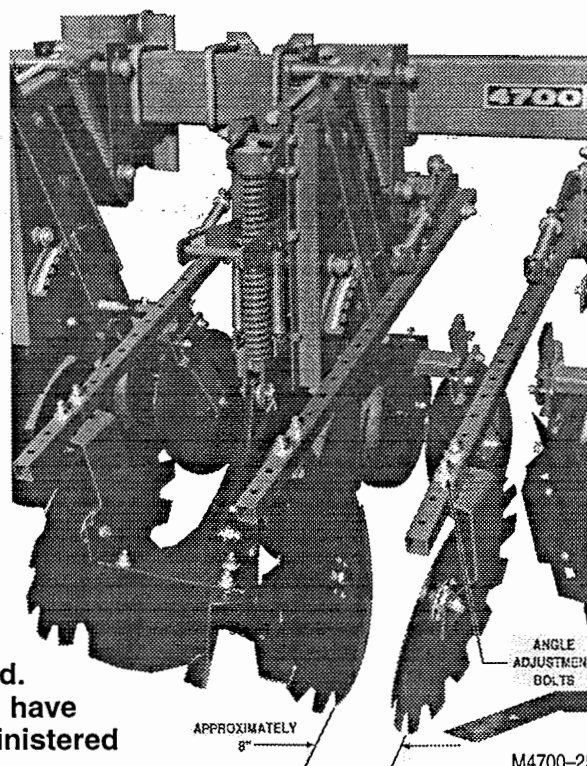
Disc shields can perform several different functions depending on plant size.

- Small plants (up to 8" tall) are shielded from soil flow by aligning the discs parallel to the row.
- Soil can be feathered in around taller plants (12" to 20" tall) by adjusting the disc at an angle to the row.
- The shield blades can be reversed to assist in making ridges.
- Disc shield blades can also be used for closing soil and residue behind anhydrous knife.

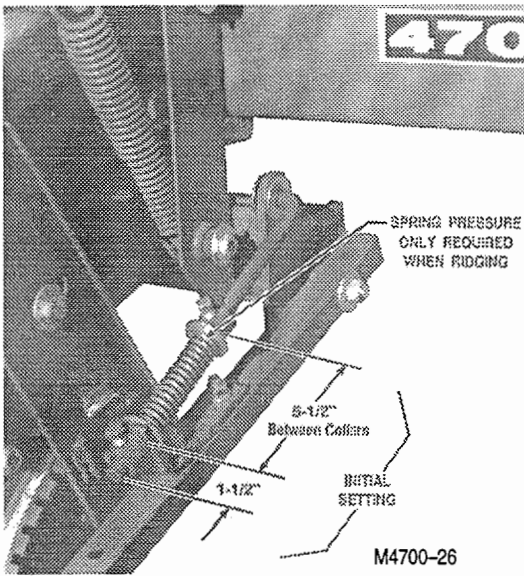


### **Danger:**

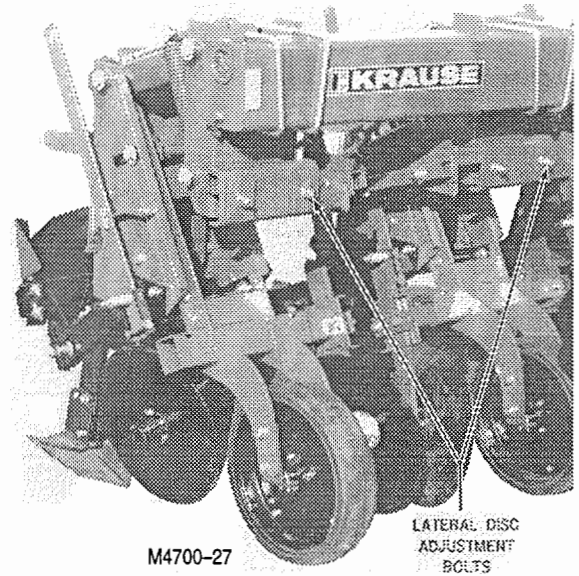
Due to their sharpness and weight, serious injury can be inflicted by disc shields if not handled safely. Watch for any unsafe conditions. Always keep your co-workers safety in mind. Should personal injury occur, have medical treatment administered immediately.



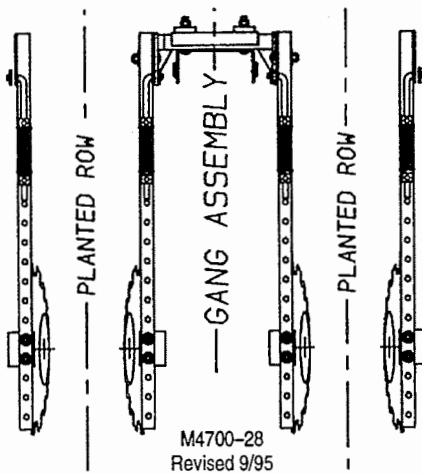
M4700-25



M4700-26



M4700-27



M4700-28  
Revised 9/95

a.)

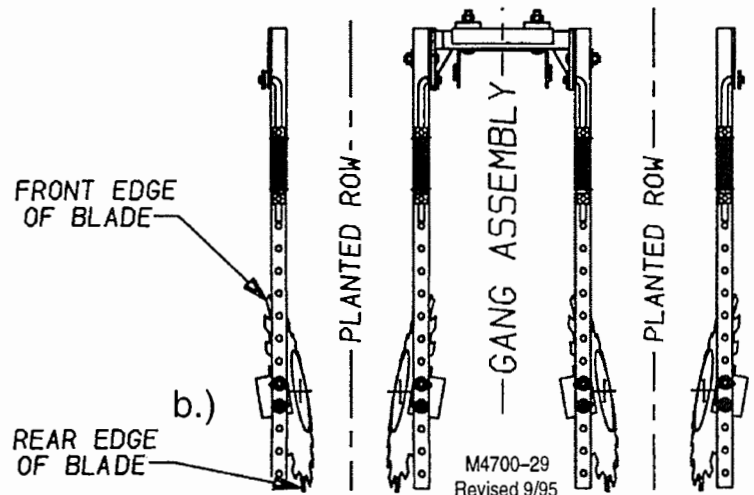
- a. Disc shield blades set parallel with the row to protect small plants up to 8" tall.

NOTE: The concave side of the disc shield blade is always away from the row except when ridging.

- b. Disc shield blades can be angled to feather soil in around the plants when they are from 12 to 20" tall.

Tilt front edge of blade AWAY FROM ROW so that the notches do not rake leaves down.

Tilt rear edge of blade CLOSE TO ROW so that the notches tend to lift and straighten the plants.



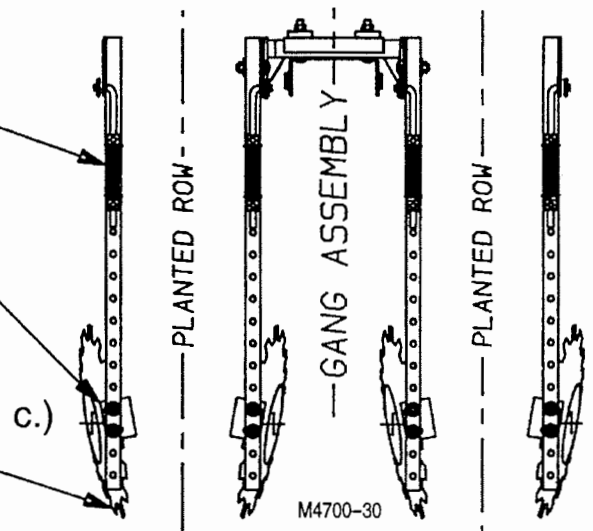
M4700-29  
Revised 9/95

- c. Shield blades can be reversed to assist in ridging.

MAY NEED SLIGHTLY MORE DOWN PRESSURE. DO NOT ADJUST COLLARS CLOSER THAN 4-1/2", TO ALLOW FOR FLOAT.

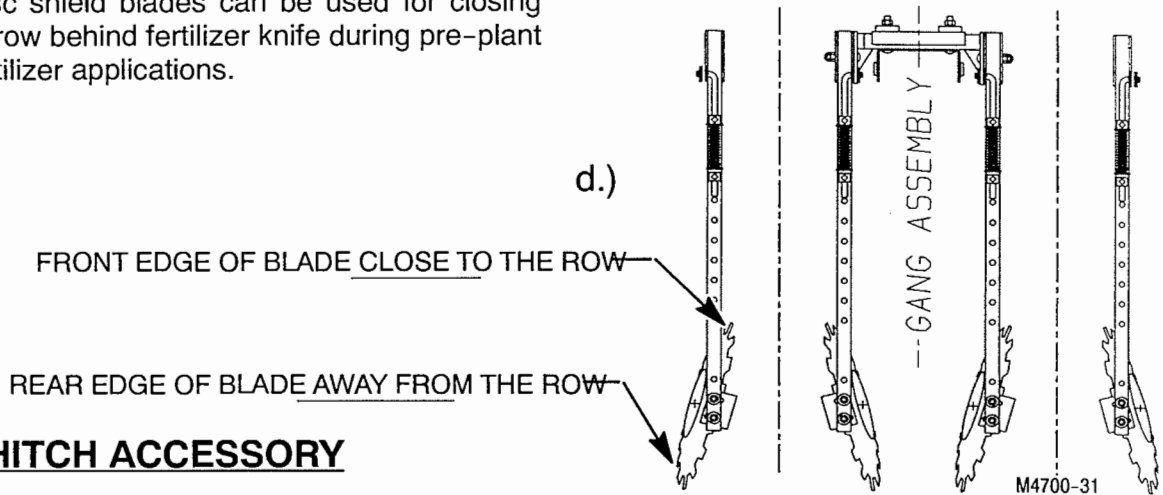
BLADE AND ARM REVERSED SO THAT CONCAVE SIDE IS TOWARD ROW.

REAR EDGE OF BLADE CLOSE TO THE ROW



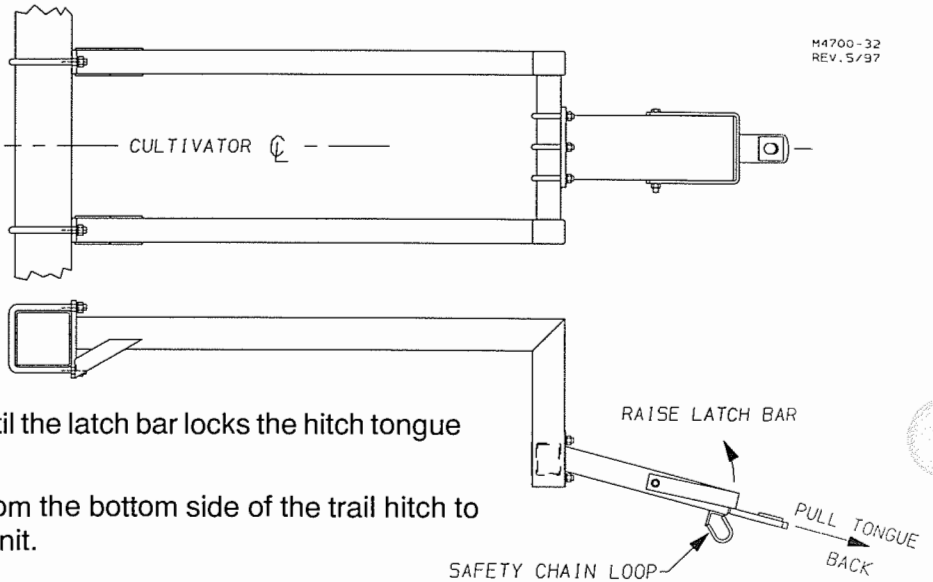
M4700-30

- d. Disc shield blades can be used for closing furrow behind fertilizer knife during pre-plant fertilizer applications.



### TRAIL HITCH ACCESSORY

- Back the cultivator up in front of the unit to be towed.
- Place the tractor in park and set the brake before dismounting to connect the hitch.
- Raise the trail hitch latch bar and pull the tongue back to connect it to the towed unit.
- Slowly back the tractor until the latch bar locks the hitch tongue in place.
- Connect a safety chain from the bottom side of the trail hitch to the tongue of the towed unit.

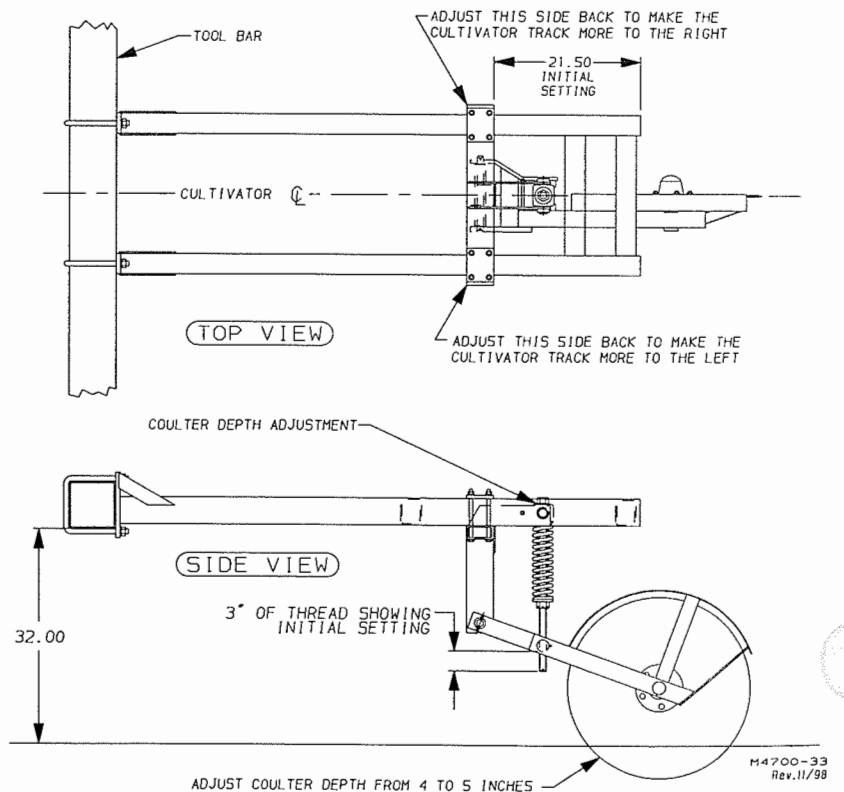


### REAR STABILIZER ACCESSORY

A rear stabilizer coultter is recommended if:

- Your soil conditions vary enough that the cultivator tends to wander from side to side.
- Your tractor is equipped with a 3-Point Guidance System that moves the lower hitch points forward or backward. (A Rear Stabilizer Coultter will make the guidance system react much faster because of the rear anchor point.)

**NOTE:** If your 3-Point Guidance System Hitch slides from side to side, with no front to rear movement, the Rear Stabilizer is not required.



## **4700, 4730 & 4750 STABILIZATION**

### **WHAT KIND OF STABILIZATION IS NEEDED FOR CONTOUR FARMING ON SLOPES.**

- a. ALL CULTIVATORS SOLD FOR CONTOUR FARMING ON SLOPES SHOULD BE EQUIPPED WITH SINGLE COULTERS.

### **WHEN IS IT OKAY TO OPERATE A CULTIVATOR WITHOUT A REAR STABILIZER?**

- a. IF THE CULTIVATOR HAS SINGLE COULTER GANGS.
- b. 4 OR 6 ROW CULTIVATOR, WITH DOUBLE COULTER GANGS, MOUNTED TO LARGER THAN NORMAL TRACTOR WITH THE SWAY BLOCKS SET TIGHT.
- c. 4, 6 OR 8 ROW UNITS WITH DOUBLE COULTER GANGS ATTACHED TO A TRACTOR EQUIPPED WITH A NAVIGATOR STYLE SLIDING GUIDANCE HITCH.

### **WHEN SHOULD A REAR STABILIZER BE PURCHASED WITH THE CULTIVATOR?**

- a. ON ANY DOUBLE COULTER GANG CULTIVATOR THAT IS NOT EQUIPPED WITH A GUIDANCE SYSTEM.
- b. ON ANY DOUBLE COULTER GANG CULTIVATOR THAT HAS AN ACURA-TRACK STYLE PIVOTING GUIDANCE HITCH.

### **CAN A TRAIL HITCH FOR TOWING AN ANHYDROUS NURSE TANK BE ADDED TO THE BACK OF THE REAR STABILIZER FRAME.**

- a. AN ANHYDROUS HITCH CAN BE ADDED TO THE BACK OF A 4700 REAR STABILIZER FRAME; HOWEVER, THE HITCH ON SOME TRACTORS, SUCH AS THE LATE MODEL JOHN DEERES, MIGHT LIFT TOO HIGH. EQUIPPING THE UNIT WITH SINGLE COULTER GANGS MAY BE A BETTER CHOICE.
- b. DO NOT ATTACH A TRAIL HITCH TO A 4750 SERIES REAR STABILIZER BECAUSE IT WILL LIFT TOO HIGH ON ANY TRACTOR. THE 4750 CULTIVATORS SHOULD BE EQUIPPED WITH SINGLE COULTERS IF A TRAIL HITCH IS REQUIRED.

### **HOW MANY REAR STABILIZERS ARE RECOMMENDED ON A CULTIVATOR EQUIPPED WITH DOUBLE COULTER GANGS?**

- a. ONE STABILIZER IS RECOMMENDED FOR 4, 6 & 8 ROW CULTIVATORS.
- b. TWO STABILIZERS ARE RECOMMENDED FOR 12 & 16 ROW CULTIVATORS.

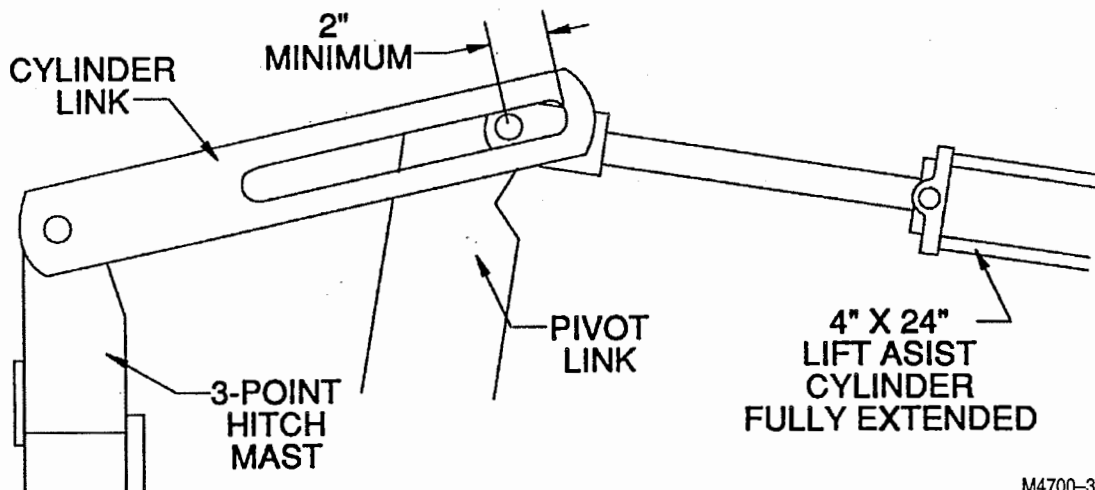
## **REAR LIFT ASSIST WHEEL (OPTIONAL)**

The rear assist wheel and the 3-Point Top Link have been connected to provide a unique lift assist design. The top link is released when the assist wheel cylinder is extended so that the cultivator is only being carried by the lower 3-Point arms and the rear assist wheel. Since there is no load being carried by the top 3-Point link, the unit can go over a hill or through a ditch, and the rear wheel will carry a constant load without a need for large springs or for expensive hydraulic accumulators.

When the cultivator is lowered to field operating position, the assist wheel cylinder locks the top 3-Point mast against the wheel frame stops, raises the assist wheel above the ground, and holds it in this position while cultivating.

## Tractor 3-Point Upper Limit Adjustment

Adjust the upper limit on the tractor 3-Point Hitch until there is at least 2 inches from the pin to the end of the slot with the cultivator on level ground, and the lift assist cylinder fully extended.



## FERTILIZER EQUIPMENT

Contact Krause for information and referrals.

## SERVICING

### General Maintenance

All bolts should be checked and tightened after the first half day of operation and periodically thereafter.

Check sweep blades, coulter blades, and disc blades after 200 hours of use and replace worn parts as needed.

**⚠ Warning:** Disc blades are very sharp, to prevent injury, use extreme caution when replacing or working around disc blades.

Maintenance should be done whenever possible, with the cultivator lowered to the ground.

Follow this procedure when changing sweeps:

- a. Place the wing lock pins in the storage holes and unfold the wings.
- b. Raise cultivator approximately 6" above the ground.
- c. Place stands under each end of the tool bar.
- d. Put tractor in park position, set brake, turn off engine and block tires to prevent the cultivator from rolling.
- e. Change sweeps from a position behind the gang, not under the gang.

**⚠ Warning:** Make sure that the tool bar is supported by stands, the tractor is in park, the brake has been set, and the engine turned off before attempting to change sweeps.

## Lubrication



The initial lubrication of all grease fittings will assure long life and satisfactory performance from the implement. Use a multi-purpose type grease at all grease zerk locations.

Grease the rolling shields after each 24 hours of use.

Grease the tool bar hinges after 200 hours of use.

Grease tool bar gauge wheels after 80 hours of use.

cart.3

## HYDRAULIC SAFETY & HYDRAULIC SYSTEM

### HYDRAULIC SAFETY PLEASE READ CAREFULLY

If the implement hydraulic system has never been used, stored over a period of time or disassembled for any reason, unpin the rod ends of the cylinders and support the cylinders so the rod ends will clear frame members when fully extended. Back the tractor to the front of the implement and connect the hydraulic hoses. Check the tractor hydraulic reservoir and make sure it is full of the manufacturer's recommended oil. If you are sure the implement hydraulic hose connections are tight, begin filling the system by extending and retracting the cylinders. Hold the control lever open and pause at the end of each stroke to bleed the air from the system. Continue the cycles until the cylinders respond with immediate solid actuation. When you are sure the systems are free of air, pin the rod ends of the cylinders to the implement cylinder lugs.

**Warning:** Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



### AVOID HEATING NEAR PRESSURIZED HYDRAULIC HOSES

Flammable spray can be generated by heating near pressurized hydraulic hoses, resulting in severe burns to yourself and bystanders. Do not heat by welding, or using a torch near hoses. Hose can be accidentally cut when heat goes beyond the immediate flame area.

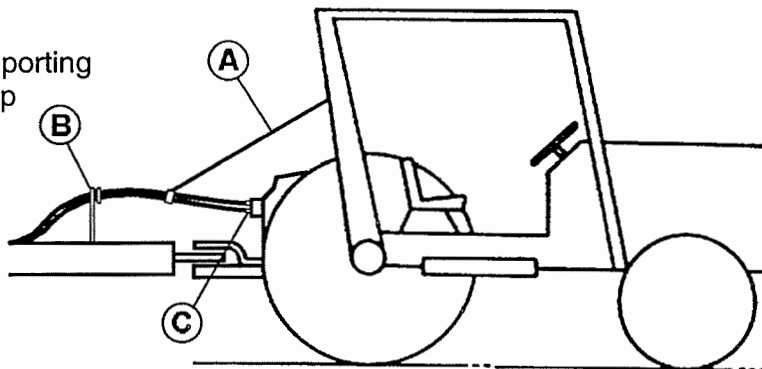
### THE FOLLOWING WARNINGS PERTAIN TO THE MORE COMMON ABUSES OF HYDRAULIC HOSE:

1. **INSPECT** the hose assembly before each use.
2. **REPLACE** the hose assembly immediately if:
  - f. The jacket of the hose appears abnormal.
  - g. You have reason to believe it may be abnormal.
  - h. There is any fluid leakage.
  - i. The couplings are damaged.
  - j. The hose is damaged or kinked.
  - k. The reinforcement is visible through the jacket.
3. **DO NOT EXCEED** the maximum recommended working pressure of the hose.
4. **DO NOT KINK** the hose assembly.
5. **DO NOT BEND** the hose assembly beyond its minimum recommended bend radius of 3.25 in.
6. **DO NOT EXPOSE** to temperatures in excess of 225° Fahrenheit.
7. **DO NOT USE AS A STRENGTH MEMBER** for pulling or lifting equipment.

**Caution:** If replacing hydraulic hose, use only hose that meets or exceeds 3,000 PSI working pressure.

**IMPORTANT:** REPAIR OF HYDRAULIC CYLINDERS SHOULD BE MADE BY AN AUTHORIZED KRAUSE DEALER.

Prevent damage to trail hoses by supporting them from the tractor with an elastic strap "A". Avoid having excess hose between the implement support "B" and the tractor connection "C". Either reposition the hose farther back on the implement or request a shorter hose from your dealer.



Before removing any hydraulic parts, always relieve hydraulic pressure by turning off tractor engine and moving tractor control lever(s) back and forth.

**Warning:** Air in the hydraulic system will allow the implement or wings to drop suddenly resulting in serious injury to anyone under the wings.

Fill the hydraulic system by extending and retracting the cylinders. Hold the control lever open and pause at the end of each stroke of the cycles to bleed the air from the system. Continue the cycles until the cylinders respond with immediate solid actuation.

**IMPORTANT:** REPAIR OF HYDRAULIC CYLINDERS SHOULD BE MADE BY AN AUTHORIZED KRAUSE DEALER.

## STORAGE

Select a level area, lower the wings and set the implement down on blocks to prevent sweeps from settling into the ground. Coat the sweeps, disc blades, and wing lift cylinder rods with a rust preventative. Inspect for worn or damaged parts and replace as needed to avoid delays the next season. Check to be sure hydraulic hose couplers are stored on top of the frame and not left laying on the ground.

## REPAIR PARTS

Refer to the assembly section of this book when repairing or replacing parts, and follow the same procedure as used when assembling a new unit. Reverse this procedure for disassembly. The Parts Section of this book will show a breakdown of assemblies, locations of parts, and part numbers. Krause parts were developed and tested for these units, therefore, it is recommended that Krause replacement parts be used.

**Caution:** If replacing hydraulic hose, use only hose that meets or exceeds 3,000 PSI working pressure.

## SUGGESTED REMEDIES FOR POSSIBLE FIELD PROBLEMS

PROBLEM	POSSIBLE PROBLEM	SUGGESTED REMEDY
Weeds cut but still standing	Cultivator set too deep	Decrease sweep depth
	Tractor speed too slow	Increase to 6 or 7 M.P.H.
	Sweep too flat	Tip sweep point down slightly lower than wing
Residue dragging on end of sweep wings	Sweep wings sliding on top of ground	Increase sweep depth
		Adjust sweep more level
		Increase spring down pressure
Sweep not penetrating	Worn sweeps	Replace with new sweeps
	Sweep wings too low	Adjust sweep point slightly lower than wing
	Not enough spring down pressure and/or tool bar ballast	Increase down pressure spring setting on affected gangs. (see page O13)
	Double coulter set too deep	Decrease coulter depth
Residue plugging between coulter and shank	Coulter not cutting residue	Increase coulter depth
		Increase down pressure (see page O13)
		Dull or worn coulters (replace as necessary)
	Residue hairpinning on sweep wings causing sweeps to float to surface	Increase sweep depth until it is underneath of residue
Plugging between cut-away blades and gauge wheel arms	Discs are too close to gang	Move closer to row
	Discs set too deep	Decrease cut-away depth
	1/2 Row gangs sinking in soft ground on return pass	Add offset gauge wheel accessory to half row gangs (see page O16)
Gang gauge wheels sinking in dirt	Too much spring down pressure	Decrease down pressure spring setting (See page O13)
Disc shields cutting leaves of taller plants	Blades set too straight	Increase the disc angle so that leading edge is away from crop (see page O17)
Sweep blades bending	Rocks or obstructions	Decrease tractor speed to 4 or 5 M.P.H.
		Decrease depth
		Reduce down pressure

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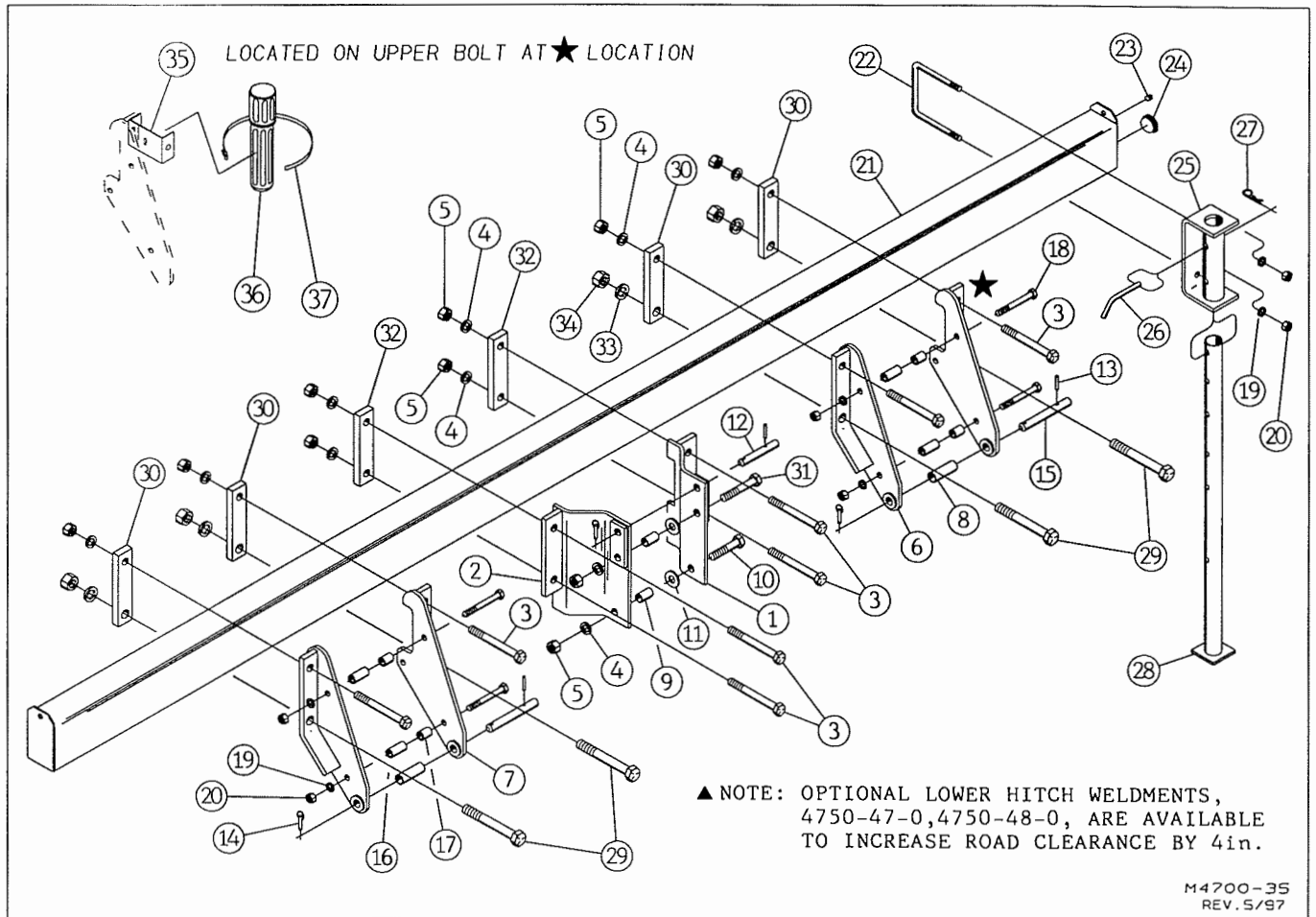
# **PARTS SECTION**

THE FOLLOWING ILLUSTRATED PARTS SECTION HAS BEEN COMPILED TO REFLECT PART NUMBERS REQUIRED TO ORDER PARTS, AND TO SUPPORT THE ASSEMBLY SECTION FOR DIMENSIONS AND DESCRIPTIONS OF ALL PARTS, BOLTS, PINS, ETC. THE OPERATOR CAN ALSO IDENTIFY PART NAMES TO CLARIFY PROPER OPERATIONAL STEPS.



11/11/11

# 4700 3-POINT HITCH 7 X 7 RIGID TOOL BAR MODELS



**FOR MODELS - 4704-0R3, 4704-0R4, 4706-0R3, 4734-0R3, 4734-0R4, 4736-0R3**

3/00

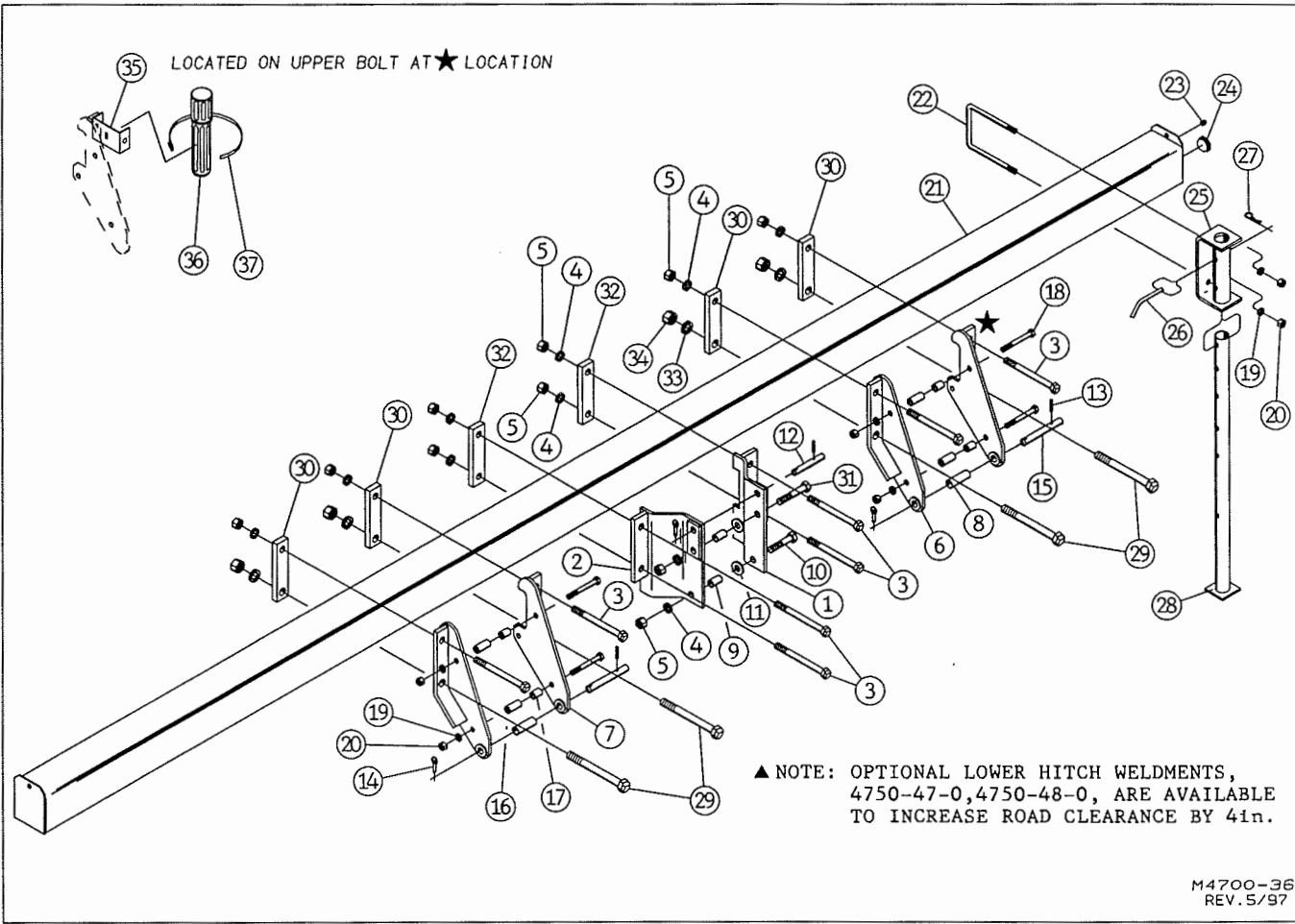
Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	4700-13-0	Left Top Hitch Weldment	1	22	61-190	3/4" DIA. U-Bolt	2
2	4700-12-0	Right Top Hitch Weldment	1	23	75-101	1/2NPT Sq. Head Pipe Plug	1
3	62-601	1NC x 10" GD. 5 Cap Screw	8	24	75-105	2NPT Drum Hole Cover	1
4	64-118	1" STD. Lock Washer	10		4700-57-0	Tool Bar Stand Assembly	2
5	63-117	1NC Hex Nut	10	25	4700-59-0	Stand Bracket	1
6	★ 4700-47-0C	Left Bottom Hitch Weldment	2	26	4600-0-28	Stand Pin	1
7	★ 4700-48-0C	Right Bottom Hitch Weldment	2	27	60-716	#3 Hair Pin Cotter	1
8	5210-101-9	Bushing	2	28	4700-49-0	Stand Weldment	1
9	5210-101-8	Top Link Bushing	2	29	62-642	1-1/4NC x 11" GD. 5 Bolt	4
10	62-481	1NC x 4-1/2" GD. 5 Cap Screw	1	30	4750-0-18	Bolt Plate - 3 Pt. Hitch 5 x 7	4
11	64-119	1" STD. Flat Washer	2	31	62-504	1NC x 5-1/2" GD. 5 Cap Screw	1
12	4700-66-2	Top Link Pin	1	32	4700-0-18	Bolt Plate - 3 Pt. Hitch 5 x 7	2
13	60-615	3/8" DIA. x 2" Roll Pin	3	33	64-125	1-1/4" STD. Lock Washer	4
14	60-102	Klick Pin	3	34	63-123	1-1/4NC Hex Nut	4
15	4700-66-3	Hitch Pin	2	35	4600-0-39	Bracket	1
16	4700-66-1	Long Spacer	6	36	99-192	Owner's Manual Canister	1
17	4600-0-32	Short Spacer	6	37	25-1163	Clamp	1
18	62-213	3/4NC x 6-1/2" GD. 5 Cap Screw	6				
19	64-112	3/4" STD. Lock Washer	8				
20	63-112	3/4NC Hex Nut	8				
21	▲ 4704-3-0	Tool Bar Weldment 130" Long	1				
	■ 4704-4-0	Tool Bar Weldment 172" Long	1				
	● 4706-4-0	Tool Bar Weldment 190" Long	1				

▲ USED FOR MODEL 4704-0R3

■ USED FOR MODEL 4704-0R4

● USED FOR MODEL 4706-0R3

# 4700 3-POINT HITCH 7 X 7 RIGID TOOL BAR MODELS

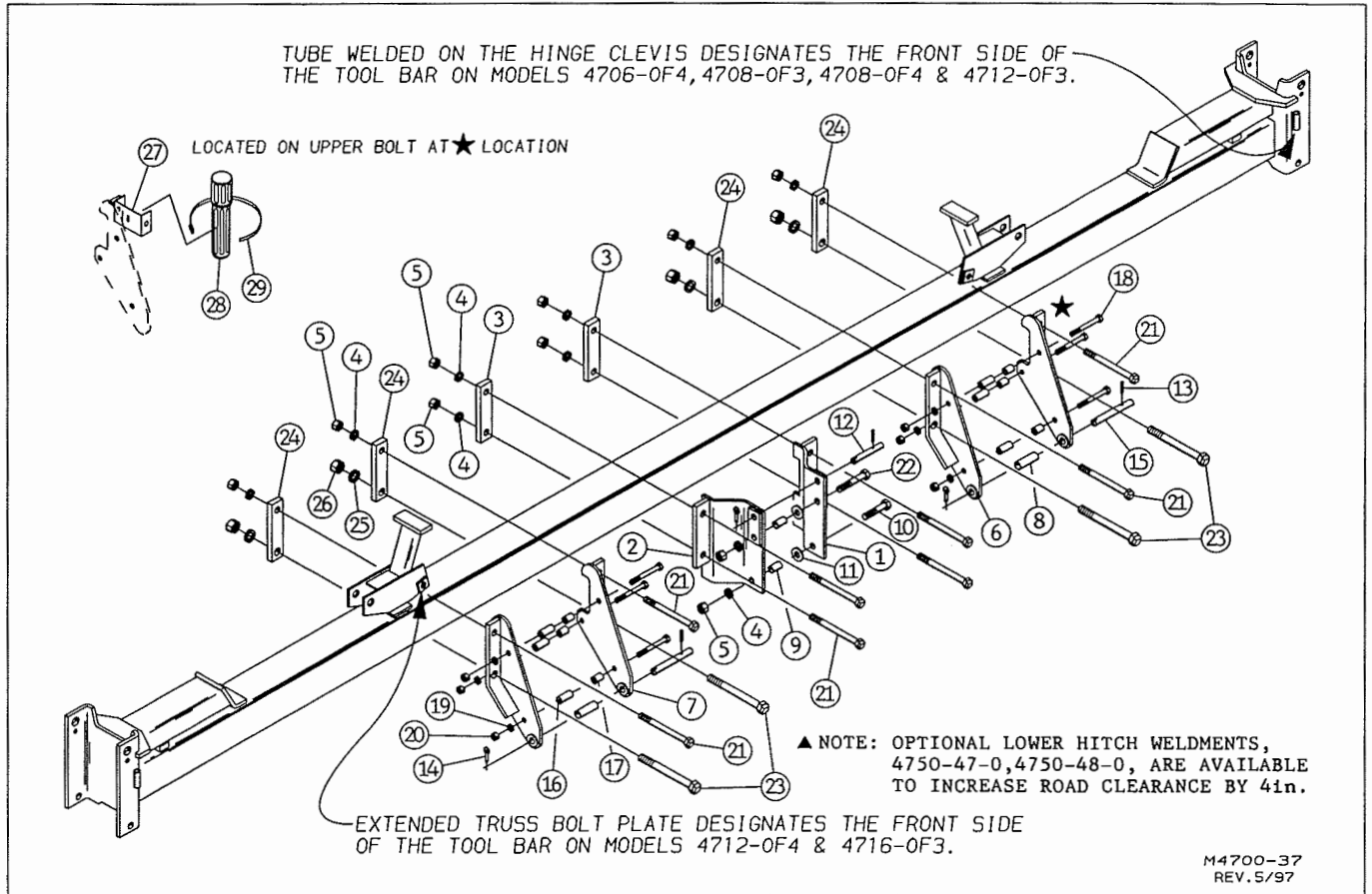


## FOR MODELS -- 4706-0R4, 4708-0R3, 4736-0R4, 4738-0R3

5/97

Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	4700-13-0	Left Top Hitch Weldment	1	22	61-190	3/4" DIA. U-Bolt	2
2	4700-12-0	Right Top Hitch Weldment	1	23	75-101	1/2NPT Sq. Head Pipe Plug	1
3	62-601	1NC x 10" GD. 5 Machine Bolt	8	24	75-105	2NPT Drum Hole Cover	1
4	64-118	1" STD. Lock Washer	10		4700-57-0	Tool Bar Stand Assembly	2
5	63-117	1NC Hex Nut	10	25	4700-59-0	Stand Bracket	1
6	4700-47-0 C	Left Bottom Hitch Weldment	2	26	4600-0-28	Stand Pin	1
7	4700-48-0C	Right Bottom Hitch Weldment	2	27	60-716	#3 Hair Pin Cotter	1
8	5210-101-9	Bushing	2	28	4700-49-0	Stand Weldment	1
9	5210-101-8	Top Link Bushing	2	29	62-642	1-1/4NC x 11" GD. 5 Bolt	4
10	62-481	1NC x 4-1/2" GD. 5 Cap Screw	1	30	4750-0-18	Bolt Plate	4
11	64-119	1" STD. Flat Washer	2	31	62-504	1NC x 5-1/2" GD. 5 Cap Screw	1
12	4700-66-2	Top Link Pin	1	32	4700-0-18	Bolt Plate	2
13	60-615	3/8" DIA. x 2" Roll Pin	3	33	64-125	1-1/4" STD. Lock Washer	4
14	60-102	Klick Pin	3	34	63-123	1-1/4NC Hex Nut	4
15	4700-66-3	Hitch Pin	6	35	4600-0-39	Bracket	1
16	4700-66-1	Long Spacer	6	36	99-192	Owner's Manual Canister	1
17	4600-0-32	Short Spacer	6	37	25-1163	Clamp	1
18	62-213	3/4NC x 6-1/2" GD. 5 Cap Bolt	6				
19	64-112	3/4" STD. Lock Washer	10				
20	63-112	3/4NC Hex Nut	10				
21	4708-1-0	Tool Bar Weldment (250" Long)	1				

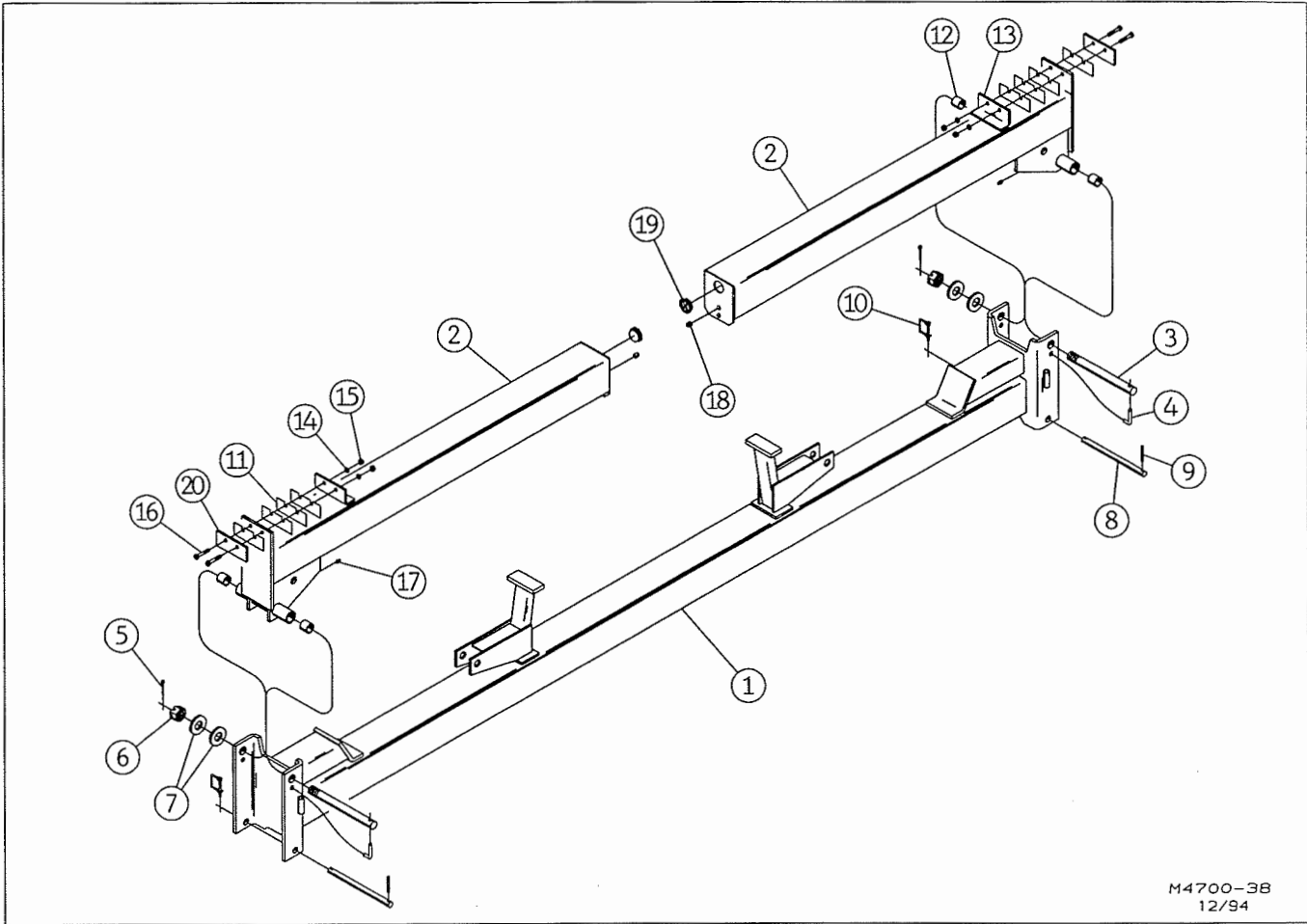
# 4700 3-POINT HITCH FOLDING MODELS



**FOR MODELS - 4706-OF4, 4708-OF3, 4708-OF4, 4712-OF3, 4712-OF4, 4716-OF3, 4736-OF4, 4738-OF3, 4738-OF4, 4742-OF3 5/97**

Item	Part Number	Part Description	Qty.
1	4700-13-0	Left Top Hitch Weldment	1
2	4700-12-0	Right Top Hitch Weldment	1
3	4700-0-18	Bolt Plate	2
4	64-118	1" STD. Lock Washer	10
5	63-117	1NC Hex Nut	10
6	▲ 4700-47-0C	Bottom Hitch Weldment, Left	2
7	▲ 4700-48-0C	Bottom Hitch Weldment, Right	2
8	5210-101-9	Bushing	2
9	5210-101-8	Bushing Top Link	2
10	62-481	1NC x 4-1/2" GD. 5 Cap Screw	
11	64-119	1" STD. Flat Washer	1
12	4700-66-2	Top Link Pin	2
13	60-615	3/8" DIA. x 2" Roll Pin	1
14	60-102	Klick Pin	3
15	4700-66-3	Hitch Pin	3
16	4700-66-1	Long Spacer	6
17	4600-0-32	Short Spacer	6
18	62-213	3/4NC x 6-1/2" GD. 5 Cap Screw	6
19	64-112	3/4" STD. Lock Washer	6
20	63-112	3/4NC Hex Nut	6
21	62-601	1NC x 10" GD. 5 Machine Bolt	6
22	62-504	1NC x 6-1/2" GD. 5 Cap Screw	8
23	62-642	1-1/4NC x 11" GD. 5 Machine Bolt	1
24	4750-0-18	Bolt Plate	4
25	64-125	1-1/4" STD. Lock Washer	4
26	63-123	1-1/4NC Hex Nut	4
27	4600-0-39	Bracket	1
28	99-192	Owner's Manual Canister	1
29	25-1163	Clamp	1

# 4700 WING MODEL TOOL BAR



M4700-38  
12/94

**FOR MODELS - 4706-0F4, 4708-0F3, 4708-0F4, 4736-0F4, 4738-0F3, 4738-0F4**

5/97

Item	Part Number	Part Description	Qty.
1	● 4706-2-0A	Center Tool Bar 121-1/4" Long	1
	▲ 4708-3-0B	Center Tool Bar 132-3/4" Long	1
	★ 4708-2-0A	Center Tool Bar 172-1/4" Long	1
2	●▲ 4706-20-0A	Wing Tool Bar 65-1/4" Long	2
	★ 4708-20-0A	Wing Tool Bar 79-1/4" Long	2
3	4600-0-25A	Hinge Pin	2
4	1901-0-2	Hinge Lock Pin	2
5	60-711	1/4" DIA. x 3" Cotter Pin	2
6	63-128	1-1/2NC Slotted Hex Nut	2
7	64-129	1-1/2" STD. Flat Washer	4
	4706-23-0	Wing Lock Pin Assembly	2
8	4706-23-1	Wing Lock Pin	1
9	60-618	3/8" DIA x 3" Roll Pin	1
10	60-103	5/16" DIA. P.T.O. Pin	1
11	4700-0-42	Hinge Shim (Use as needed)	8
12	53-118	Wear Sleeve	4
13	4700-0-44	Stop Angle	2
14	64-107	1/2" STD. Lock Washer	4
15	63-106	1/2NC Hex Nut	4
16	62-372	1/2NC x 2-1/2" GD. 5 Bolt	4
17	65-101	1/8NPT STD. Zerk	2
18	75-101	1/2NPT Square Head Pipe Plug	2
19	75-105	2NPT Drum Hole Cover	2
20	4700-0-43	Stop Plate	2

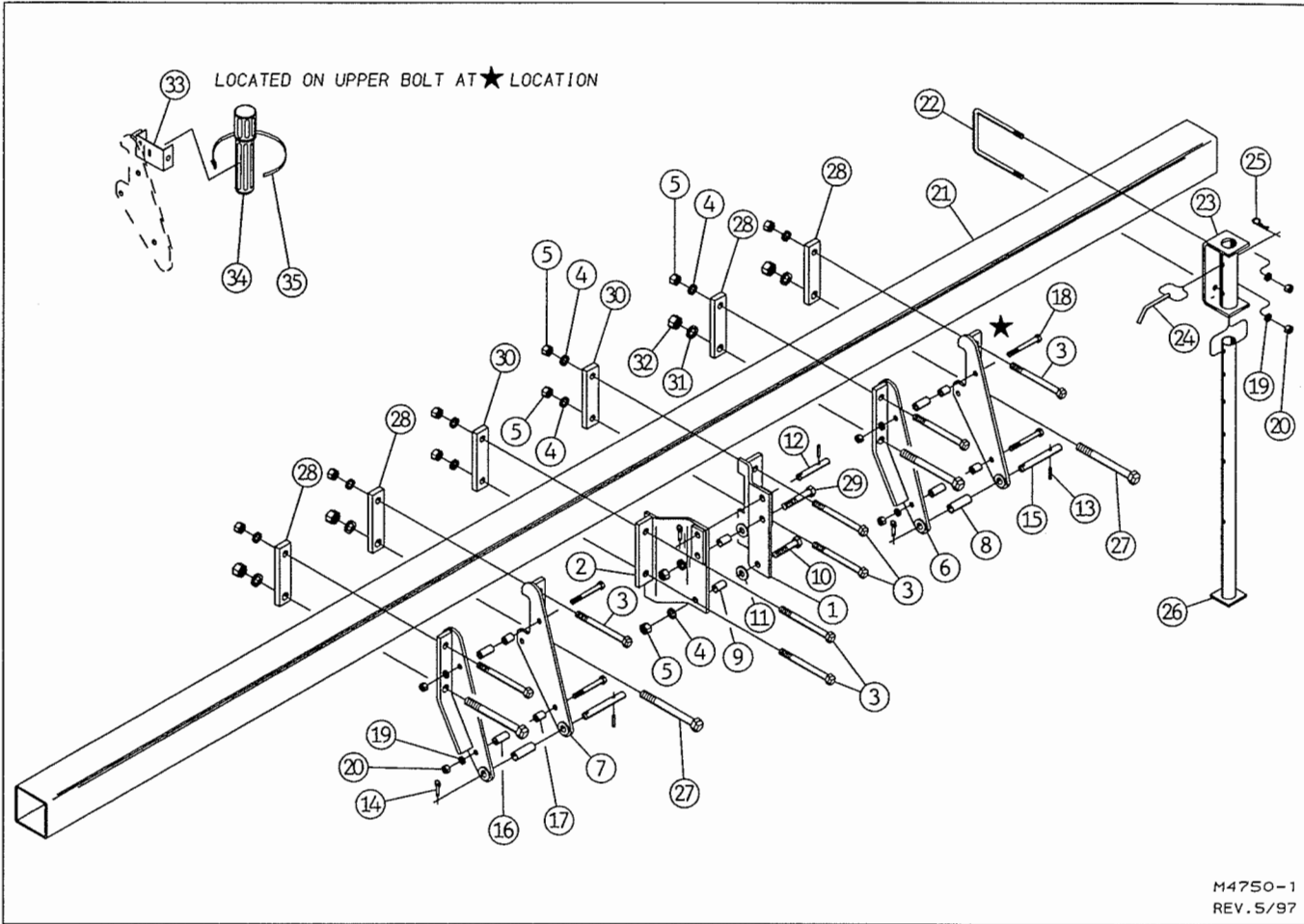
● Used for Model 4706-0F4

▲ Used for Model 4708-0F3

★ Used for Model 4708-0F4



# 4750 3-POINT HITCH & 4750 RIGID TOOL BAR MODELS



**FOR MODELS –** 3-PT. Hitch for all 4750 Models  
Tool Bars for 4756-0R3, 4756-0R4 & 4758-0R3

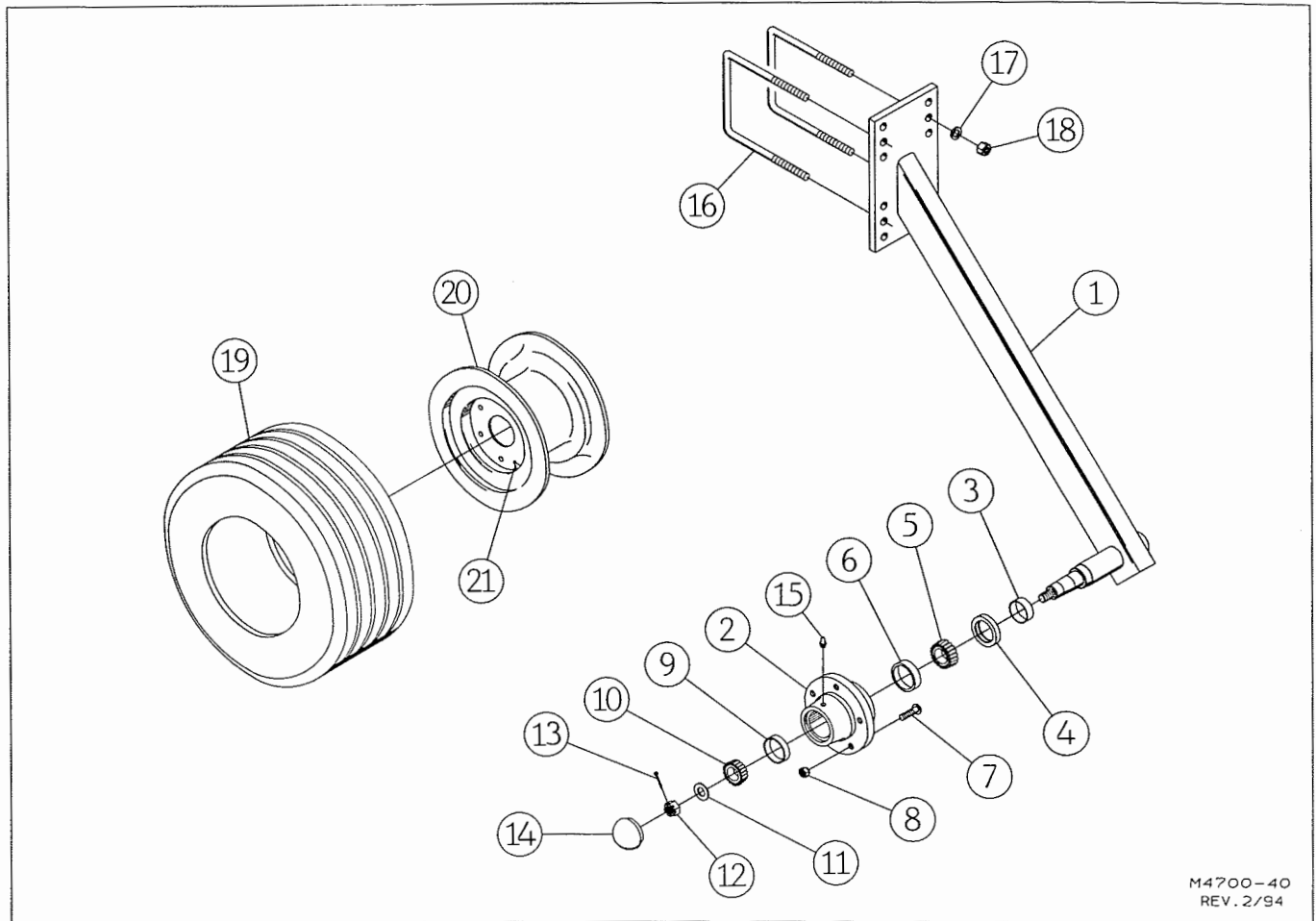
5/97

Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	4700-13-0	Left Top Hitch Weldment	1	22	61-190	3/4" DIA. U-Bolt	2
2	4700-12-0	Right Top Hitch Weldment	1		4700-57-0	Tool Bar Stand Assembly	2
3	62-601	1NC x 10" GD. 5 Bolt	8	23	4700-59-0	Stand Bracket	1
4	64-118	1" STD. Lock Washer	10	24	4600-0-28	Stand Pin	1
5	63-117	1NC Hex Nut	10	25	60-716	#3 Hair Pin Cotter	1
6	4750-47-0	Left Bottom Hitch Weldment	2	26	4700-49-0	Stand Weldment	1
7	4750-48-0	Right Bottom Hitch Weldment	2	27	62-642	1-1/4NC x 11" GD. 5 Bolt	4
8	5210-101-9	Bushing	2	28	4750-0-18	Bolt Plate	4
9	5210-101-8	Top Link Bushing	2	29	62-504	1NC x 5-1/2" GD. 5 Cap Screw	1
10	62-481	1NC x 4-1/2" GD. 5 Cap Screw	1	30	4700-0-18	Bolt Plate	2
11	64-119	1" STD. Flat Washer	2	31	64-125	1-1/4" STD. Lock Washer	4
12	4700-66-2	Top Link Pin	1	32	63-123	1-1/4NC Hex Nut	4
13	60-615	3/8" DIA. x 2" Roll Pin	3	33	4600-0-39	Bracket	1
14	60-102	Klick Pin	3	34	99-192	Owner's Manual Canister	1
15	4700-66-3	Hitch Pin	2	35	25-1163	Clamp	1
16	4700-66-1	Long Spacer	4				
17	4600-0-32	Short Spacer	4				
18	62-213	3/4NC x 6-1/2" GD. 5 Bolt	4				
19	64-112	3/4" STD. Lock Washer	10				
20	63-112	3/4NC Hex Nut	10				
21	■ 4656-1-0	Tool Bar Weldment (196" Long)	1				
	▲ 4658-1-0	Tool Bar Weldment (256" Long)	1				

■ For Model 4756-0R3

▲ For Model 4756-0R4, 4758-0R3

# GAUGE WHEEL & TIRE ASSEMBLIES

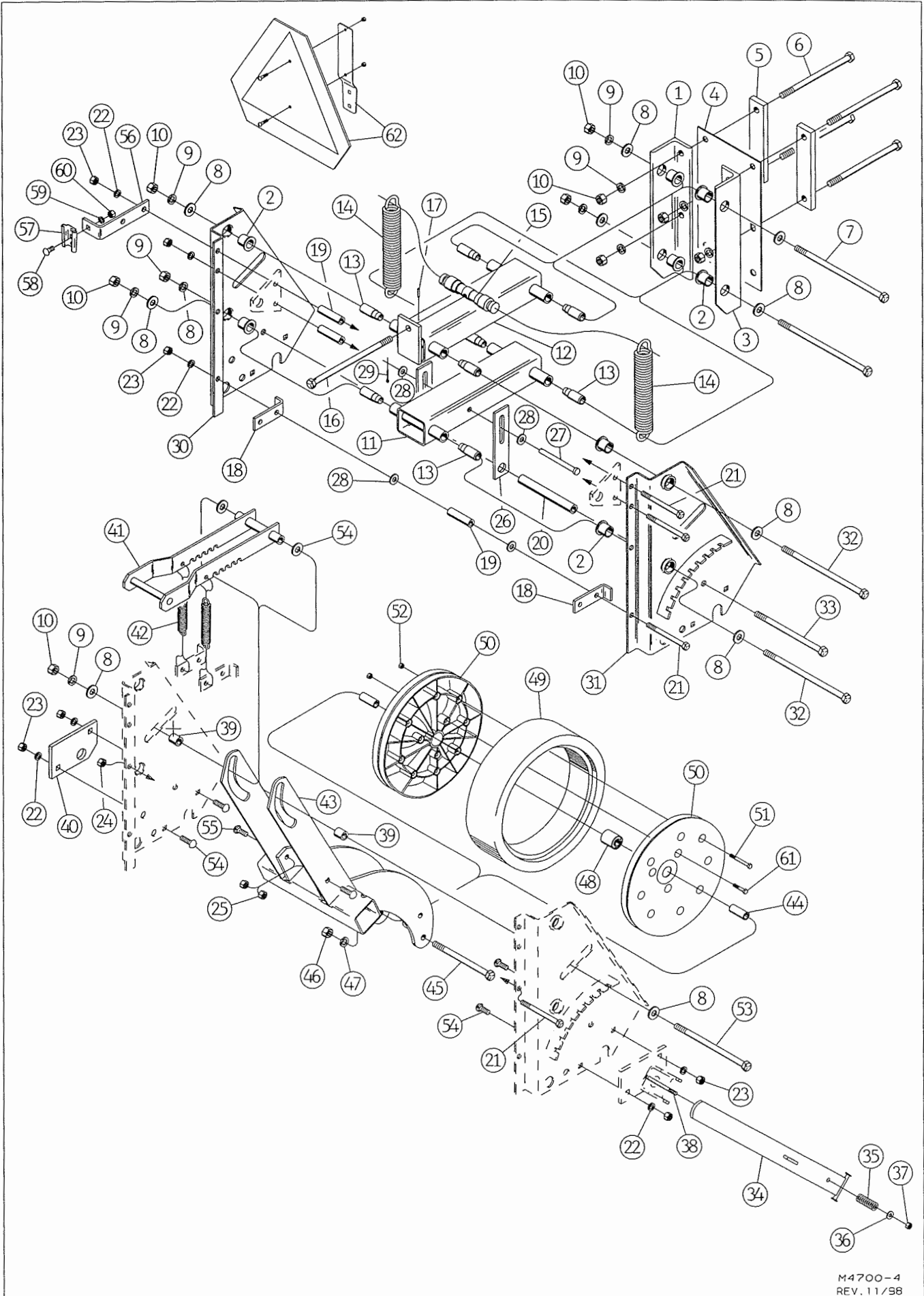


M4700-40  
REV. 2/94

**FOR MODELS - ALL 4700 & 4750 Models**

3/98

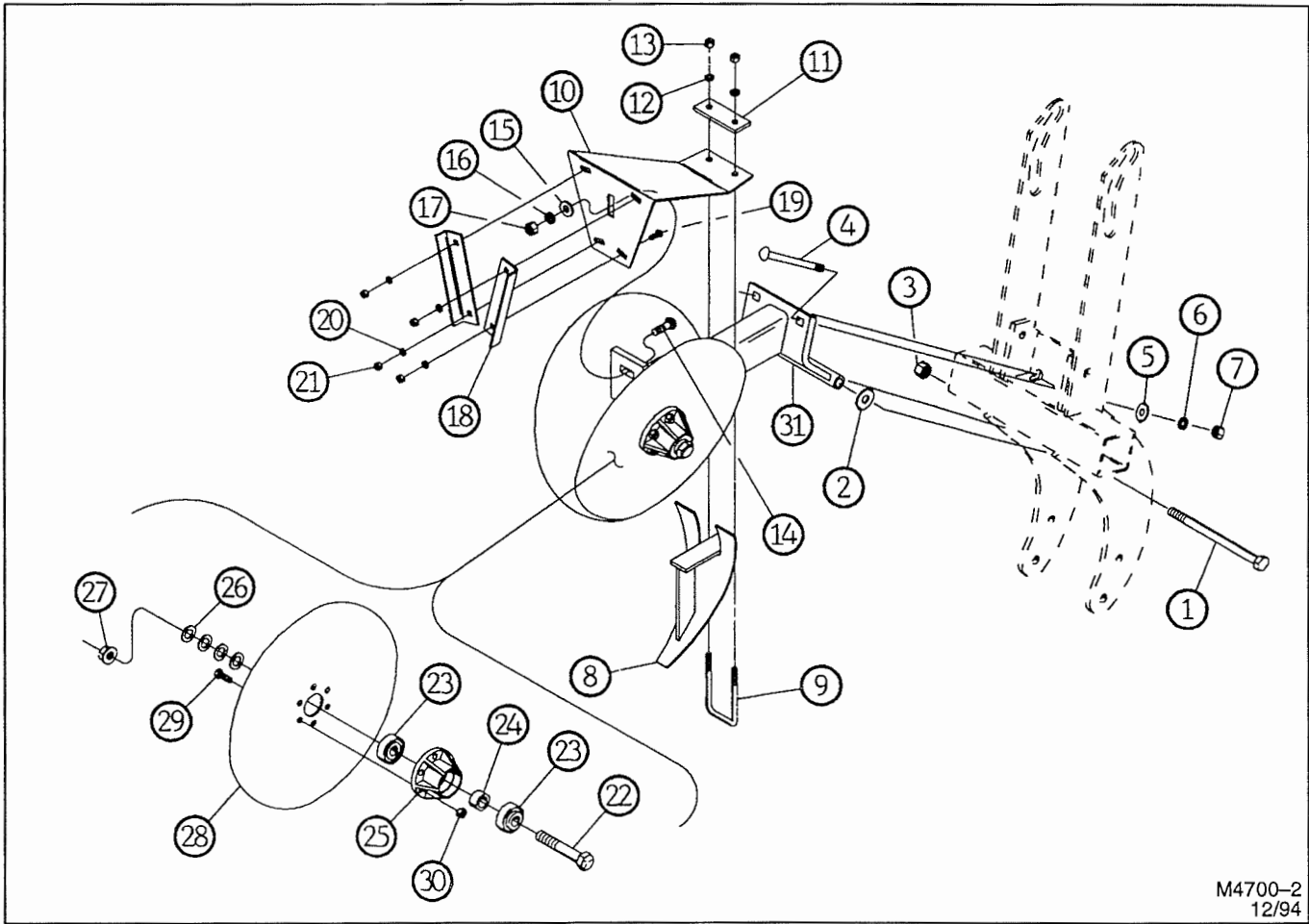
Item	Part Number	Part Description	Qty.
	4700-50-0A	Right Gauge Wheel and Hub Assembly	1
	4700-51-0A	Left Gauge Wheel and Hub Assembly	1
1	4700-216-0	Repair Right Wheel Arm Weldment (Shown)	1
	4700-215-0	Repair Left Wheel Arm Weldment (Opposite)	1
2	4990-114-0	Repair Hub Assembly	1
3	53-111	Wear Sleeve	1
4	42-115	Seal	1
5	41-112	Cone - Rear	1
6	41-208	Cup - Rear	1
7	62-286	Wheel Bolt	5
8	63-209	1/2NF Lug Nut	5
9	41-215	Cup - Front	1
10	41-117	Cone - Front	1
11	64-161	3/4" Heat Treated FLat Washer (Black)	1
12	63-201	3/4NF Slotted Hex Nut	1
13	60-725	5/32" DIA. x 1-1/2" Cotter Pin	1
14	52-305	Hub Cap	1
15	65-101	1/8" STD. Zerk	1
16	61-204	5/8" DIA. U-Bolt (For 7" x 7" Box)	2
17	64-109	5/8" STD. Lock Washer	4
18	63-109	5/8NC Hex Nut	4
	52-510	Wheel and Tire Assembly	1
19	51-121	Tire 20.5 x 8-10, 6-Ply	1
20	52-109	Wheel 10" x 6"	1
21	51-120	#415 Valve Stem	1



M4700-4  
REV. 11/98



# DOUBLE COULTER, SHIELD, GUARD & SCRAPER ASSEMBLY



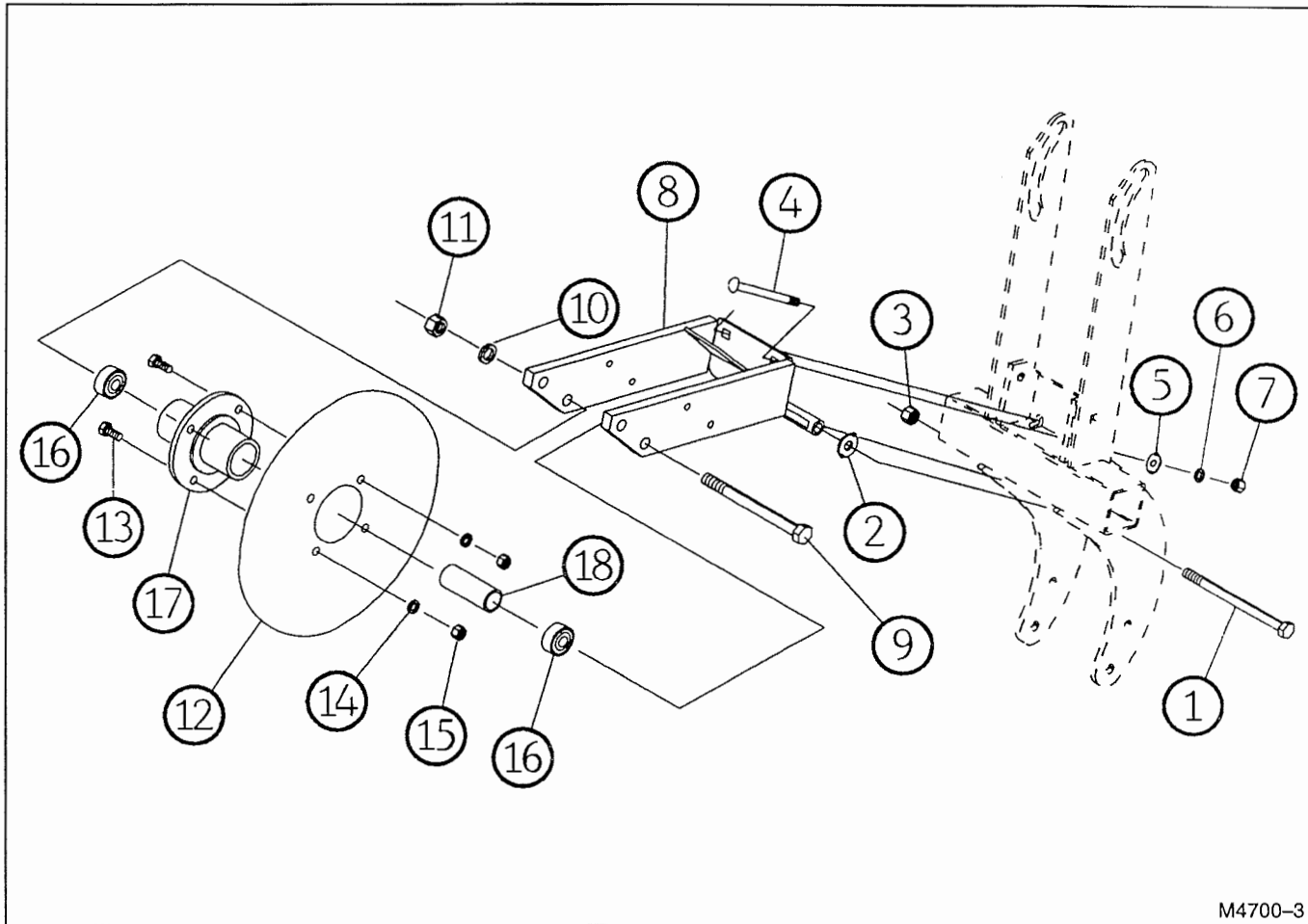
M4700-2  
12/94

## FOR MODELS – ALL Double Coulters Cultivators

12/94

Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	62-433	5/8NC x 7-1/2" GD. 5 Cap Screw	1	19	62-364	5/16NC x 3/4" GD. 5 Carriage Bolt	4
2	64-146	5/8" SAE Flat Washer	1	20	64-148	5/16" STD. Lock Washer	4
3	63-152	5/8NC Nylon-Top Lock Nut	1	21	63-135	5/16NC Hex Nut	4
4	62-482	1/2NC x 4-1/2" GD. 5 Carriage Bolt	2	22	62-625	3/4NF x 3-3/4" GD. 5 Cap Screw	1
5	64-108	1/2"STD. Flat Washer	2	23	40-155	Ball Bearing – BCA #205RTAN	2
6	64-107	1/2" STD. Lock Washer	2	24	4700-42-4	Spacer	1
7	63-106	1/2NC Hex Nut	2	25	4700-42-1A	Hub Casting	1
	4700-250-0	Double Coulters Sub-Assembly		26	64-182	1-1/4" x 3/4" X 14 Ga. Mach. Bushing	4
8	4700-111-0	Front Guard Weldment	1	27	63-232	3/4NF Flanged Serrated Nut	1
9	61-242	U-Bolt 3/8" x 2-1/16" x 4-1/2"	1	28	30-230	16" x 7 Ga. Flat Disc Blade	1
10	4700-41-3	Shield	1	29	62-108	3/8NC x 1" GD. 5 Cap Screw	6
11	4700-41-4	Clamp Plate	1	30	63-103	3/8NC Lock Nut	6
12	64-103	3/8" STD. Lock Washer	2	31	4700-251-0	Double Coulters Arm Weldment Assembly	1
13	63-102	3/8NC Hex Nut	2				
14	62-474	1/2NC x 1-1/2" GD. 5 Carriage Bolt	1				
15	64-108	1/2" STD. Flat Washer	1				
16	64-107	1/2" STD. Lock Washer	1				
17	63-106	1/2NC Hex Nut	1				
18	4700-41-5	Scraper	2				

# SINGLE COULTER ASSEMBLY



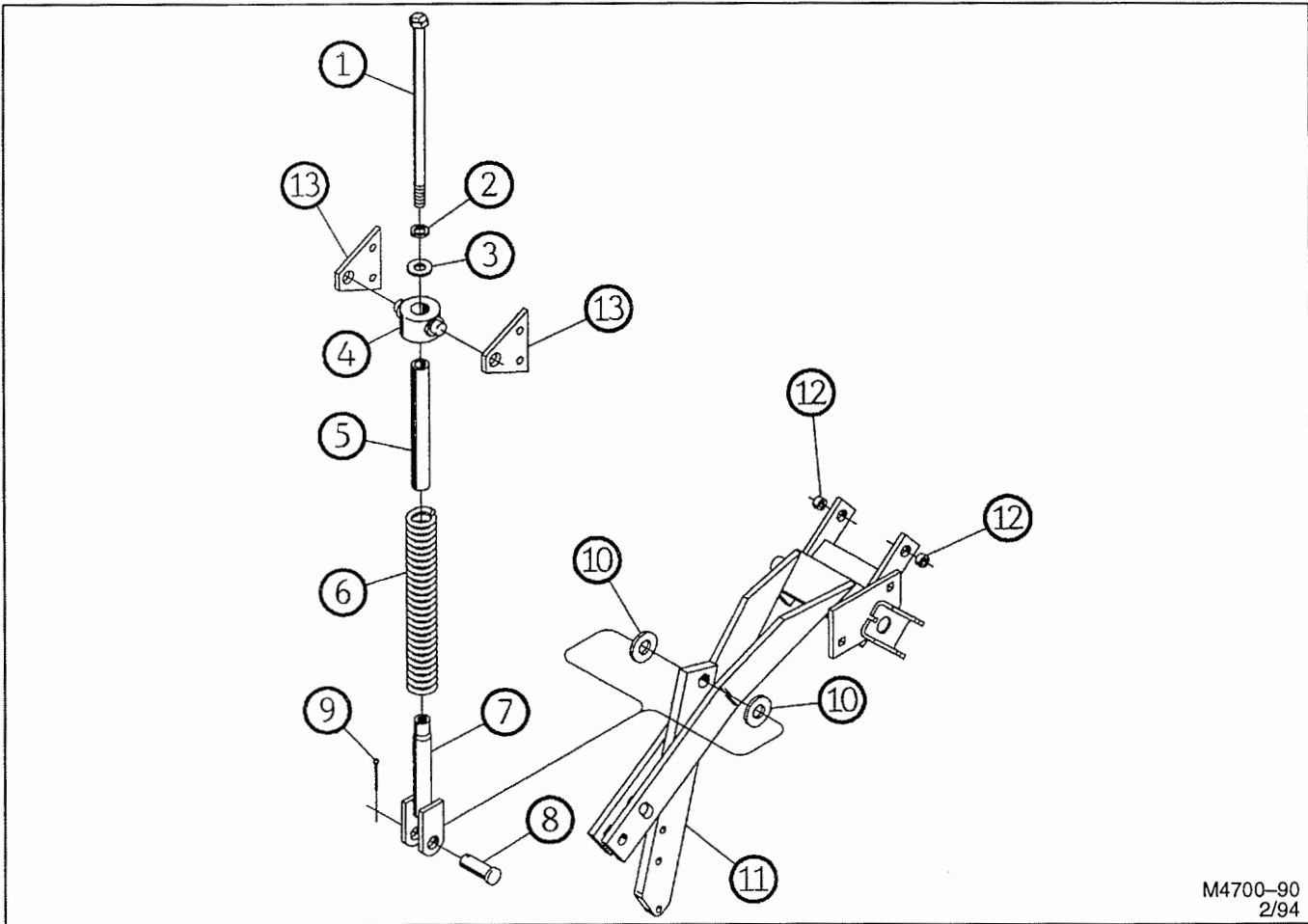
M4700-3

## FOR MODELS – All Single Coultter Cultivators

12/94

Item	Part Number	Part Description	Qty.
1	62-433	5/8NC x 7-1/2" GD. 5 Cap Screw	1
2	64-146	5/8" SAE Flat Washer	1
3	63-152	5/8NC Nylon-Top Lock Nut	1
4	62-482	1/2NC x 4-1/2" GD. 5 Carriage Bolt	2
5	64-108	1/2" STD. Flat Washer	2
6	64-107	1/2" STD. Lock Washer	2
7	63-106	1/2NC Hex Nut	2
	4700-150-0	Single Coultter Sub-Assembly	1
8	4700-151-0	Single Coultter Arm Weldment	1
9	62-215	3/4NC x 7" GD. 5 Cap Screw	1
10	64-112	3/4" STD. Lock Washer	1
11	63-112	3/4NC Hex Nut	1
12	30-201	18" x 7 Ga. Coultter Blade	1
13	62-420	1/2NC x 1-1/4" GD. 5 Cap Screw	4
14	64-107	1/2" STD. Lock Washer	4
15	63-106	1/2NC Hex Nut	4
16	40-155	Ball Bearing – BCA #205RTAN	2
17	4700-104-0	Hub Weldment	1
18	4700-103-1	Spacer Tube	1

# 4700 SHANK & SPRING ASSEMBLY



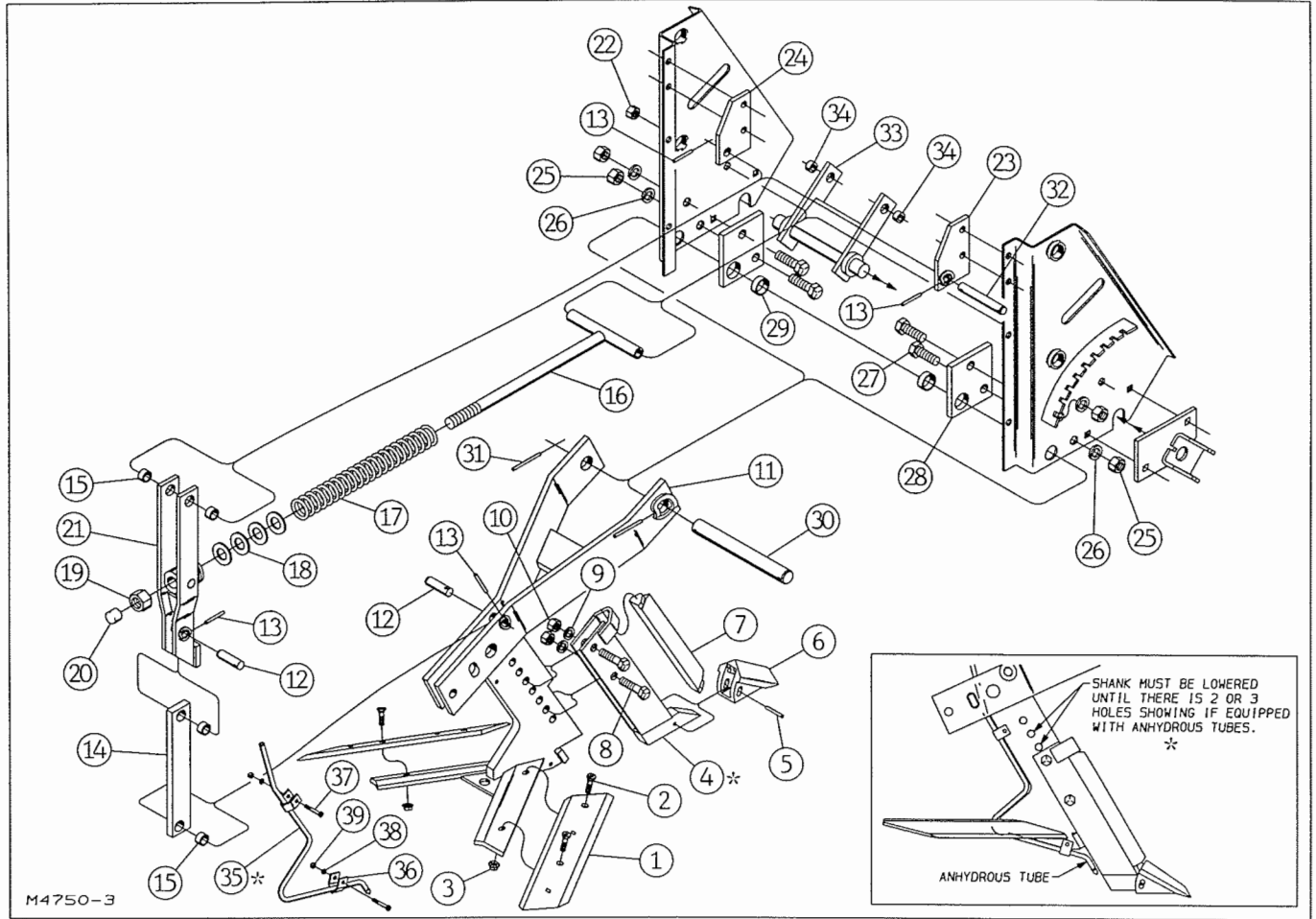
M4700-90  
2/94

## FOR MODELS – ALL 4700 MODELS

2/94

Item	Part Number	Part Description	Qty.
	4700-38-0A	Spring Shock Assembly	1
1	62-627	3/4NC x 15" GD. 5 Cap Screw	1
2	64-112	3/4" STD. Lock Washer	1
3	64-113	3/4" STD. Flat Washer	1
4	4700-38-2	Trunnion Casting	1
5	4700-38-1	Round Tube	1
6	76-203	Compression Spring (2-3/16" O.D. x 18-1/2" Long)	1
7	4700-39-0	Spring Guide Weldment	1
8	60-200	1" DIA. x 2-1/2" Clevis Pin	1
9	60-704	3/16" DIA. x 2" Cotter Pin	1
10	64-155	1" SAE Flat Washer	2
11	4700-31-0	Shank and Pivot Weldment	1
12	4700-0-14	Spacer Bushing (7/16" Long)	2
13	4700-0-10	Trunnion Bracket	2

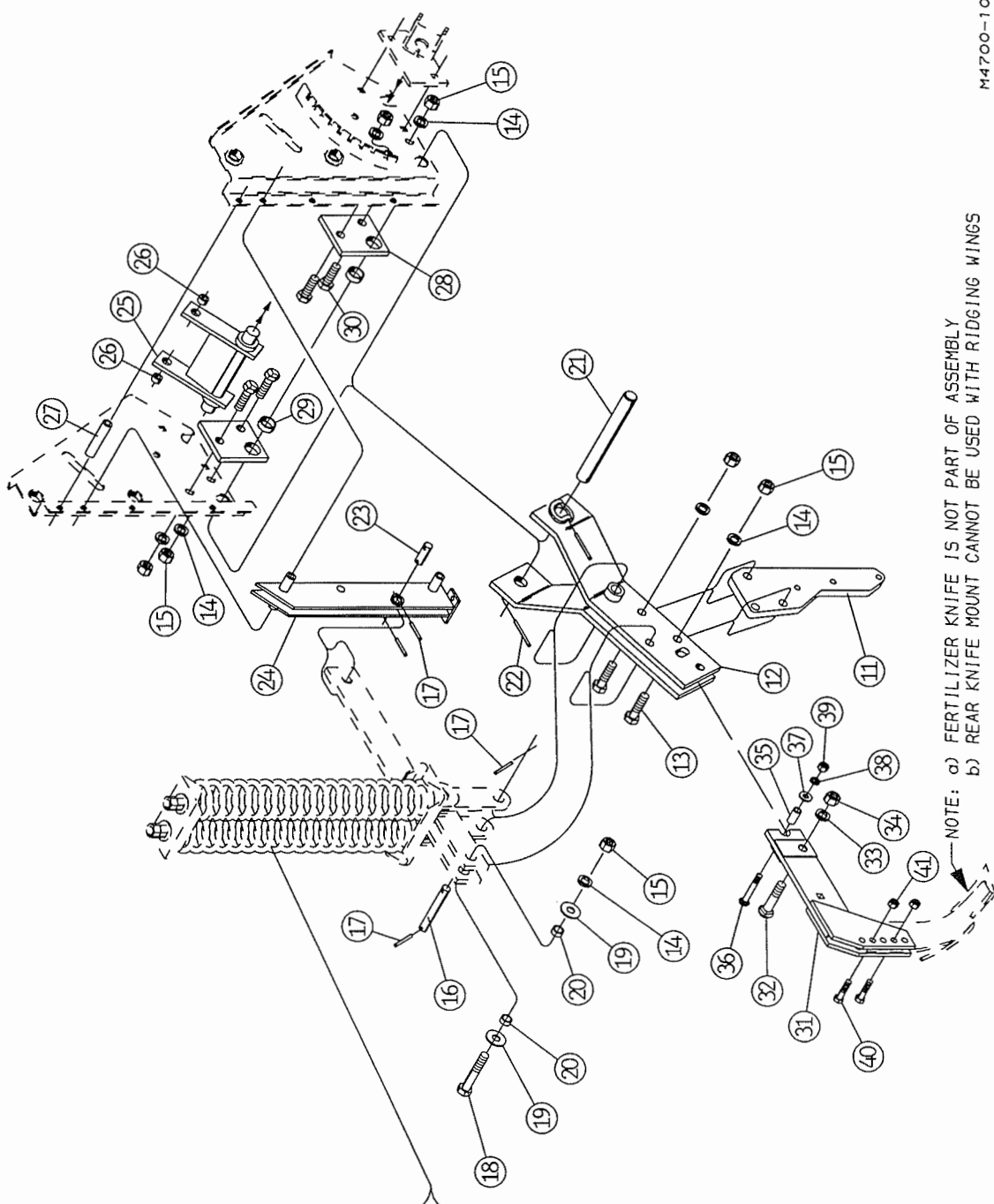
# 4750 SHANK, TRIP, LAY SHARE & FERTILIZER TUBE



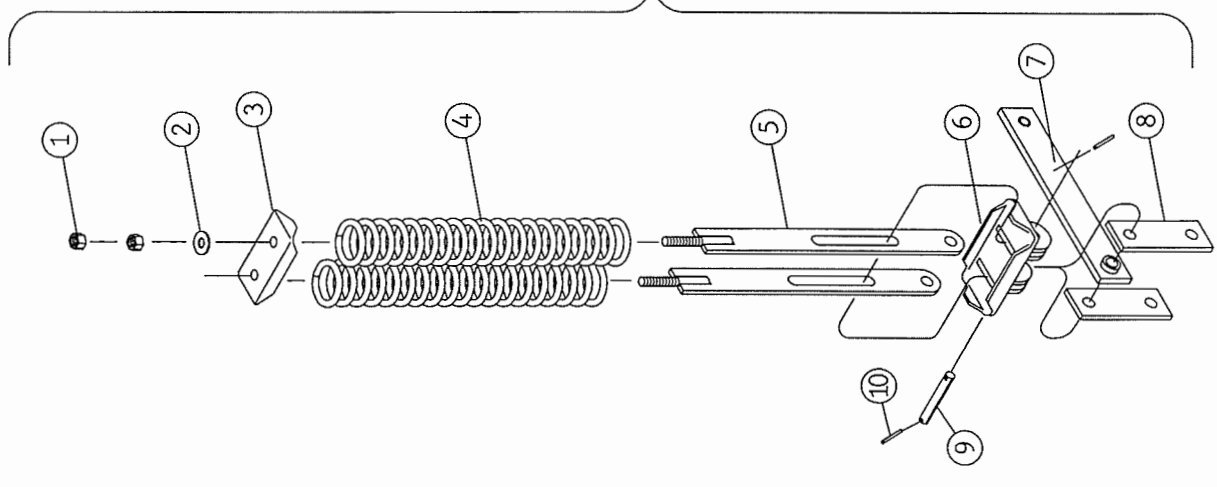
## FOR MODELS - ALL 4750 Models

3/98

Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	33-180	17" Lay Share	2	16	4750-15-0	Spring Rod Weldment	1
	33-181	19" Lay Share	2	17	76-134	Compression Spring	1
	33-182	21" Lay Share	2	18	64-155	1" SAE Flat Washer	4
	33-183	25" Lay Share	2	19	63-119	1NC Lock Nut	1
	33-184	17" Lay Share - Hard Surfaced	2	20	25-193	1" Caplug	1
	33-185	19" Lay Share - Hard Surfaced	2	21	4750-16-0	Trip Weldment	1
	33-186	21" Lay Share - Hard Surfaced	2	22	63-152	5/8NC Nylon-Top Lock Nut	1
	33-187	25" Lay Share - Hard Surfaced	2	23	4750-38-0	Bolt Plate	1
2	62-633	3/8NC x 1" GD. 5 Plow Bolt	4	24	4750-38-1	Bolt Plate	1
3	63-140	3/8NC Hex Flange Nut	4	25	63-112	3/4NC Hex Nut	4
	4750-13-0A	Shank Assembly		26	64-112	3/4"STD. Lock Washer	4
4	4750-14-0A	Shank Weldment	1	27	62-421	3/4NC x 2" GD5 Cap Screw	4
5	60-631	1/4" X 1-3/4" Roll Pin	1	28	4750-11-0	Plate Assembly	2
6	33-161A	Carbide Subsoil Point	1	29	53-109	Wear Bushing	2
7	31-176A	Carbide Wear Bar	1	30	4750-40-1	Pivot Pin 1-1/4" x 10-1/8"	1
8	62-169	5/8NC x 2" GD. 5 Cap Screw	2	31	60-609	1/4" DIA. x 3" Roll Pin	2
9	64-109	5/8" STD. Lock Washer	2	32	4750-40-2	Pivot Pin 3/4" x 4-11/16"	1
10	63-109	5/8NC Hex Nut	2	33	4750-31-0	Pivot Weldment	1
11	4750-32-0A	Shank Weldment	1	34	4700-0-14	Spacer	2
	4750-33-0A	Left 1/2 Shank		35	4750-45-1	Anhydrous Tube	1
	4750-34-0A	Right 1/2 Shank		36	4750-45-2	Tube Clamp	2
12	4750-40-3	Pivot Pin 3/4" x 2-3/8"	2	37	62-650	1/4NC x 1-1/2" GD. 5 Bolt	2
13	60-606	1/4" DIA. x2" Roll Pin	4	38	64-100	1/4" STD. Lock Washer	2
14	4750-12-0	Lower Link Assembly	1	39	63-100	1/4NC Hex Nut	2
15	53-136	Wear Bushing	4				



NOTE: a) FERTILIZER KNIFE IS NOT PART OF ASSEMBLY  
b) REAR KNIFE MOUNT CANNOT BE USED WITH RIDGING WINGS



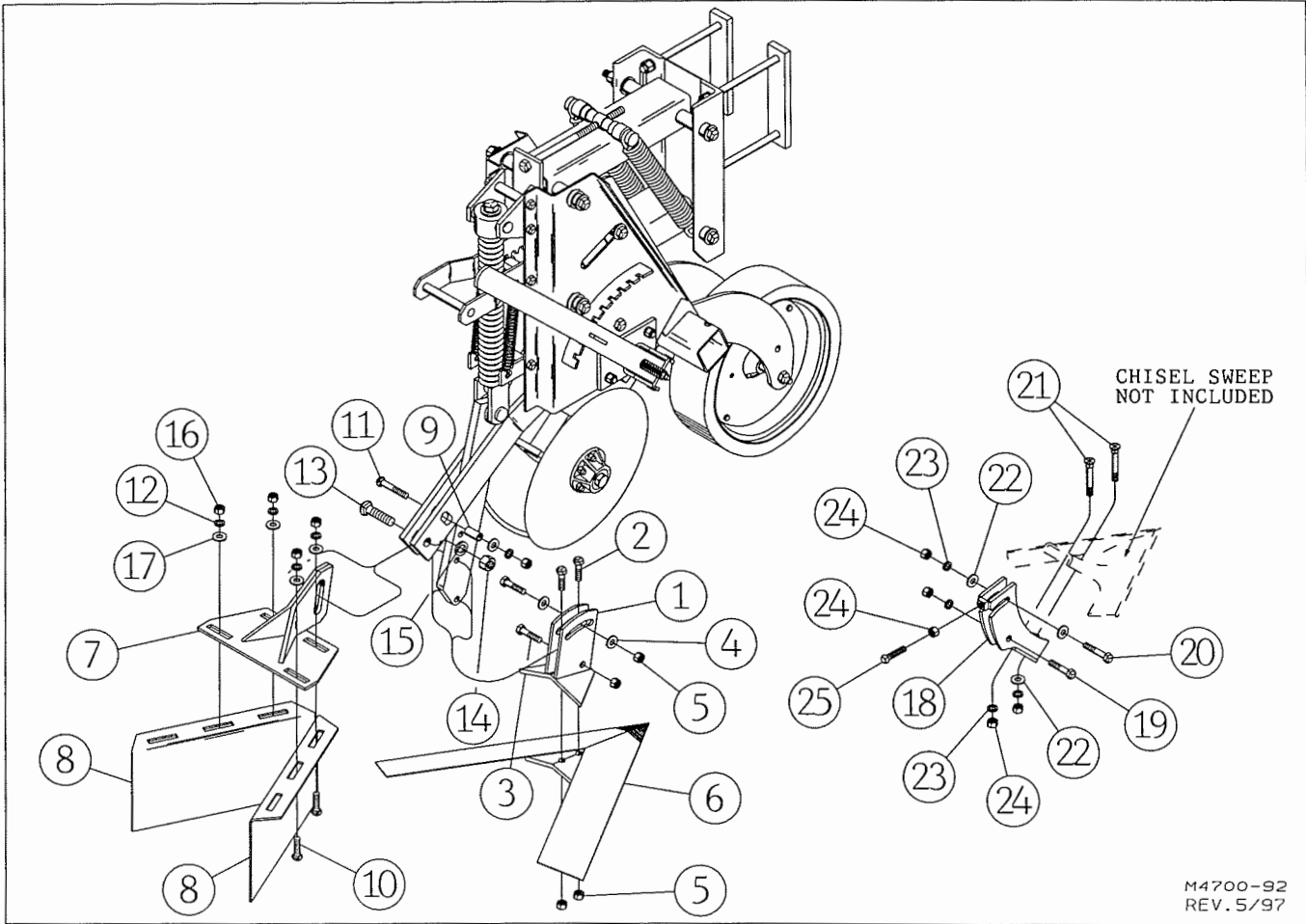
# 4730 AUTO-RESET TRIP SHANK ASSEMBLY

FOR MODELS – ALL 4730 ROCK MODELS

5/97

Item	Part Number	Part Description	Qty.
	4730-142-0	Auto-Reset Spring Assembly	
1	63-112	3/4NC Hex Nut	4
2	64-113	3/4" STD. Flat Washer	2
3	4730-142-3	Spring Cap	1
4	76-208	Compression Spring 3-3/8" O.D. x 16-1/8" Length	2
5	4730-143-0	Spring Guide Weldment	2
6	4730-144-0	Slide Weldment	1
7	4730-146-0	Trip Link Weldment	1
8	4730-142-1	Trip Link	2
9	4730-142-2	Pivot Pin 1" x 5-7/8"	1
10	60-606	1/4" DIA. x 2" Roll Pin	2
11	4730-140-2	Rock Trip Shank	1
12	4730-141-0	Shank Mounting Weldment	1
13	62-195	3/4NC x 2-1/2" GD. 5 Cap Screw	2
14	64-112	3/4" STD. Lock Washer	7
15	63-112	3/4NC Hex Nut	7
16	4730-140-5	Pivot Pin 1" x 5-1/16"	1
17	60-606	1/4" DIA. x 2" Roll Pin	4
18	62-201	3/4NC x 4" GD. 5 Cap Screw	1
19	64-113	3/4" STD. Flat Washer	2
20	4730-140-3	Spacer Bushing 1" DIA. x 15/32" Long	2
21	4730-140-6	Pin 1-1/4" x 9-3/16"	1
22	60-609	1/4" DIA. x 3" Roll Pin	2
23	4730-140-4	Pin 3/4" x 2-3/16"	1
24	4730-148-0	Link Mount Weldment	1
25	4750-31-0	Pivot Weldment	1
26	4700-0-14	Spacer Bushing 7/8" DIA. x 7/16" Long	2
27	4730-148-2	Spacer Bushing 7/8" O.D. x 3-3/4" Long	1
28	4750-11-0	Plate Assembly	2
29	53-109	Wear Bushing	2
30	62-421	3/4NC x 2" GD. 5 Cap Screw	4
	4730-155-0	Rear Knife Mount Assembly (Accessory)	
31	4730-156-0	Rear Knife Mount Weldment	1
32	62-545	3/4NC x 3" GD. 5 Cap Screw	1
33	64-112	3/4" STD. Lock Washer	1
34	63-112	3/4NC Hex Nut	1
35	4700-0-17	Spacer Bushing 3/4" O.D. x 1-3/8" Long	1
36	62-602	1/2NC x 3" GD. 5 Carriage Bolt	1
37	64-108	1/2" STD. Flat Washer	1
38	63-107	1/2" STD. Lock Washer	1
39	63-106	1/2NC Hex Nut	1
40	62-343	1/2NC x 2" GD. 5 Cap Screw	2
41	63-108	1/2NC Nylon-Top Lock Nut	2

# 4700 SWEEPS, RIDGING BLADES & FOOT PIECE ASSEMBLY



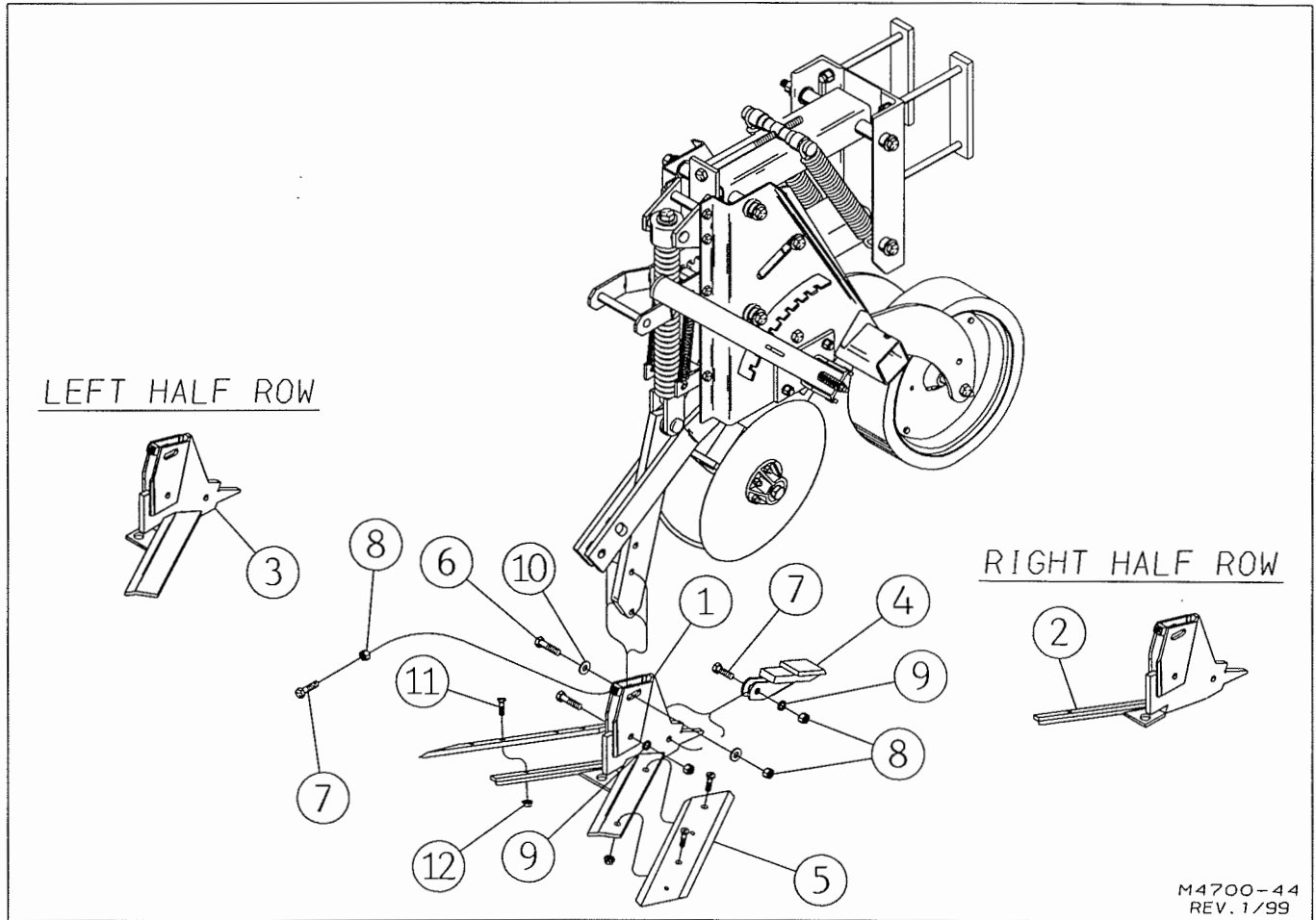
M4700-92  
REV. 5/97

**FOR MODELS - ALL 4700 Models**

3/98

Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	33-165	Sweep Mounting Bracket	1	10	62-598	1/2NC x 1-1/2" Round Head Short Square Neck Bolt	4
2	62-569	1/2NC x 1-1/2" GD. 5 Bolt	2	11	62-602	1/2NC x 3"GD. 5 Carriage Bolt	1
3	62-343	1/2NC x 2" GD. 5 Cap Screw	2	12	64-107	1/2" STD. Lock Washer	5
4	64-108	1/2" STD. Flat Washer	2	13	62-545	3/4NC x 3"GD. 5 Carriage Bolt	1
5	63-106	1/2NC Hex Nut	8	14	63-112	3/4NC Hex Nut	1
6	33-169	18" Full Sweep	1	15	64-112	3/4" STD. Lock Washer	1
	33-170	18" Left Half Sweep	1	16	63-106	1/2NC Hex Nut	5
	33-171	18" Right Half Sweep	1	17	64-108	1/2" STD. Lock Washer	1
	33-172	20" Full Sweep	1		4650-46-0	3/4" Foot Piece Assembly	1
	33-173	20" Left Half Sweep	1	18	4650-52-0	3/4" Foot Piece	1
	33-174	20" Right Half Sweep	1	19	62-343	1/2NC x 2" GD. 5 Cap Screw	1
	33-175	24" Full Sweep	1	20	62-551	1/2NC x 2-1/4" GD. 5 Bolt	1
	33-176	24" Left Half Sweep	1	21	62-524	1/2NC x 3-1/4" #3 Plow Bolt	2
	33-177	24" Right Half Sweep	1	22	64-108	1/2" STD. Flat Washer	3
	4750-78-0A	Ridging Wing Assembly	1	23	64-107	1/2" STD. Lock Washer	4
7	4700-34-0	Blade Mounting Weldment	1	24	63-106	1/2NC Hex Nut	5
8	4750-0-16A	16" Ridging Blade (All Models)	2	25	62-658	1/2NC x 2" Square Head Cup Point Set Screw	1
9	4700-0-17	Spacer Bushing	1				

# 4700 POINT AND LAY SHARES



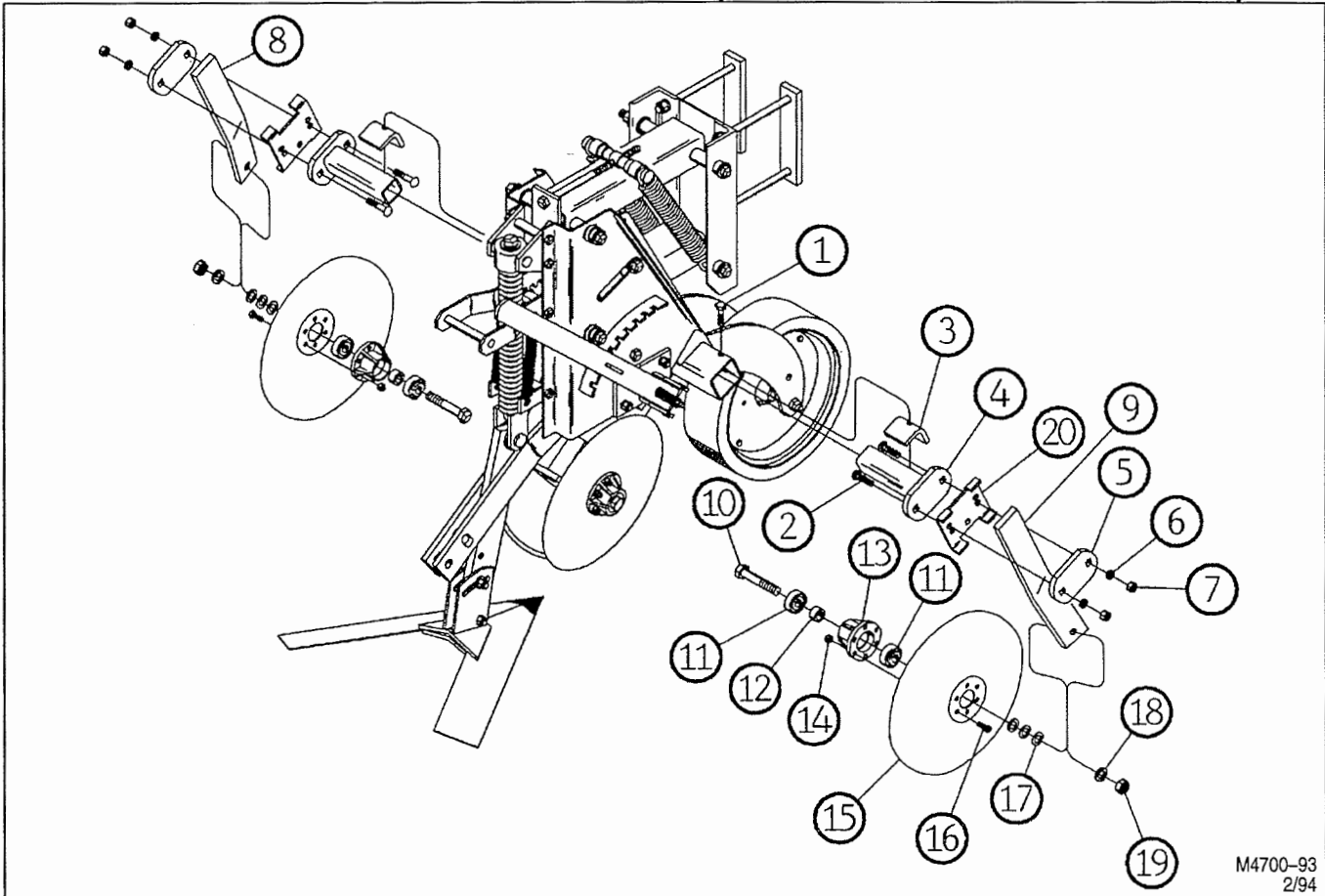
M4700-44  
REV. 1/99

**FOR MODELS - ALL 4700 Models**

1/99

Item	Part Number	Part Description	Qty.
1	4700-58-0	Blade Support Weldment (Full Row)	1
2	4700-52-0	Right Blade Support Weldment (Right Half Row)	1
3	4700-53-0	Left Blade Support Weldment (Left Half Row)	1
4	33-179	Point	1
5	33-180	17" Reversible Share	1 per 1/2 Row
	33-181	19" Reversible Share	
	33-182	21" Reversible Share	2 per 1/2 Row
	33-183	25" Reversible Share	
	33-184	17" Reversible Share - Hard Surfaced	
	33-185	19" Reversible Share - Hard Surfaced	
	33-186	21" Reversible Share - Hard Surfaced	
	33-187	25" Reversible Share - Hard Surfaced	
6	62-343	1/2NC x 2" GD. 5 Cap Screw	2
7	62-569	1/2NC x 1-1/2" GD. 5 Cap Screw	2
8	63-106	1/2NC Hex Nut	4
9	64-107	1/2" STD. Lock Washer	2
10	64-108	1/2" STD. Flat Washer	2
11	62-633	3/8NC x 1" GD. 5 #3 Plow Bolt	4
12	63-140	3/8NC Hex Flange Serrated Nut	4

# CUT-AWAY DISC ASSEMBLY (NARROW ROW MODELS)



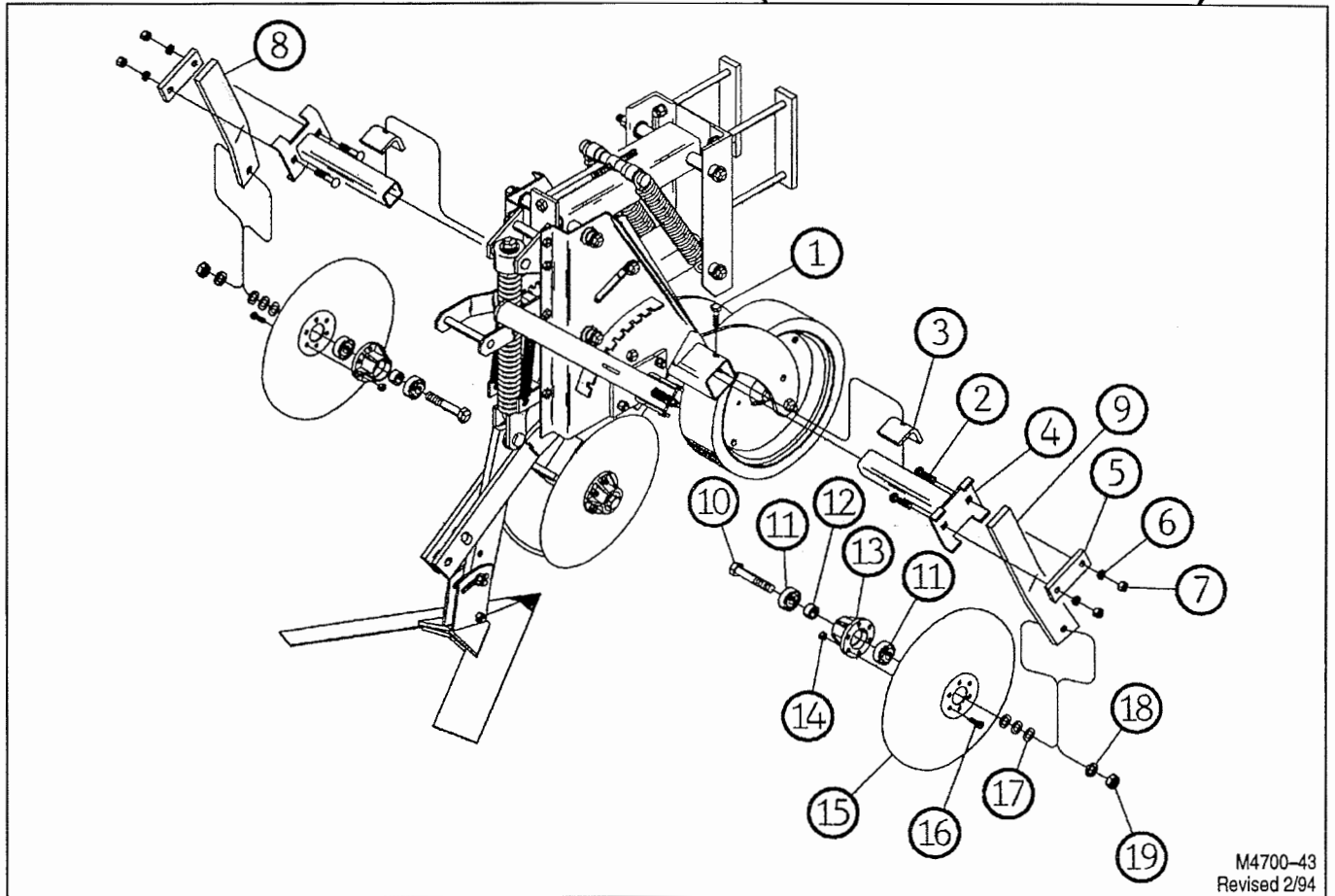
M4700-93  
2/94

**FOR MODELS** – 4704-0R3, 4706-0R3, 4708-0R3, 4708-0F3, 4712-0R3, 4712-0F3, 4716-0F3  
4756-0R3, 4758-0R3, 4762-0F3

9/95

Item	Part Number	Part Description	Qty.
1	62-665	1/2NC X 1-1/2" Square Head Cup Point Set Screw	2
2	62-648	1/2NC x 2-3/4" GD. 5 Carriage Bolt	4
3	4700-0-2	Adjustment Angle	2
4	4700-129-0	Disc Mounting Weldment	2
5	4700-129-2	Bolt Plate	2
6	64-107	1/2" STD. Lock Washer	4
7	63-106	1/2NC Hex Nut	4
	4700-45-0B	Left Disc Arm Assembly	1
	4700-46-0B	Right Disc Arm Assembly	1
8	4700-45-1B	Left Disc Arm	1
9	4700-45-2B	Right Disc Arm	1
10	62-203	3/4NC x 4-1/2" GD. 5 Cap Screw	1
11	40-155	Ball Bearing	2
12	4700-42-4	Spacer	1
13	4700-42-1A	Hub Casting	1
14	63-103	3/8NC Hex Lock Nut	6
15	30-212	16" DIA. Disc Blade	1
16	62-108	3/8NC x 1" GD. 5 Cap Screw	6
17	64-182	1-1/4" x 3/4" x 14 Ga. Machine Bushing	3
18	64-112	3/4" STD. Lock Washer	1
19	63-112	3/4NC Hex Nut	1
20	4700-0-46	Mounting Bracket	2

## CUT-AWAY DISC ASSEMBLY (WIDE ROW MODELS)



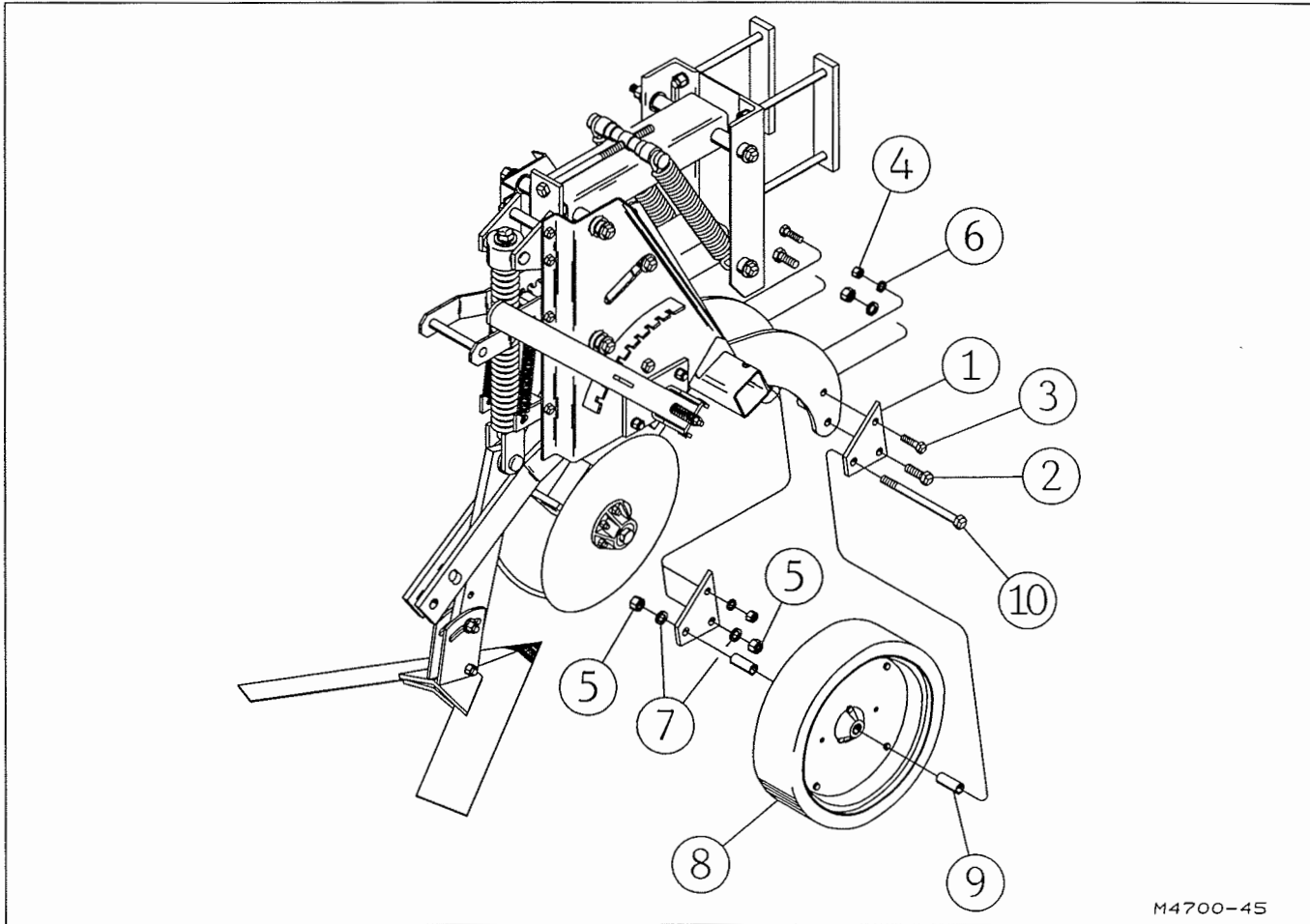
M4700-43  
Revised 2/94

**FOR MODELS – 4704-0R4, 4706-0R4, 4706-0F4, 4708-0F4, 4712-0F4, 4756-0R4**

2/94

Item	Part Number	Part Description	Qty.
1	62-569	1/2NC x 1-1/2" Cap Screw	2
2	62-472	1/2NC x 2" GD. 5 Carriage Bolt	4
3	4700-0-2	Adjustment Angle	2
4	4700-35-0	Disc Mounting Weldment	2
5	4700-0-8	Bolt Plate	2
6	64-107	1/2" STD. Lock Washer	4
7	63-106	1/2NC Hex Nut	4
	4700-45-0B	Left Disc Arm Assembly	1
	4700-46-0B	Right Disc Arm Assembly	1
8	4700-45-1B	Left Disc Arm	1
9	4700-45-2B	Right Disc Arm	1
10	62-203	3/4NC x 4-1/2" GD. 5 Cap Screw	1
11	40-155	Ball Bearing	2
12	4700-42-4	Spacer	1
13	4700-42-1A	Hub Casting	1
14	63-103	3/8NC Hex Lock Nut	6
15	30-212	16" DIA. Disc Blade	1
16	62-108	3/8NC x 1" GD. 5 Cap Screw	6
17	64-182	1-1/4" x 3/4" x 14 Ga. Machine Bushing	3
18	64-112	3/4" STD. Lock Washer	1
19	63-112	3/4NC Hex Nut	1

# WHEEL BRACKET ASSEMBLY



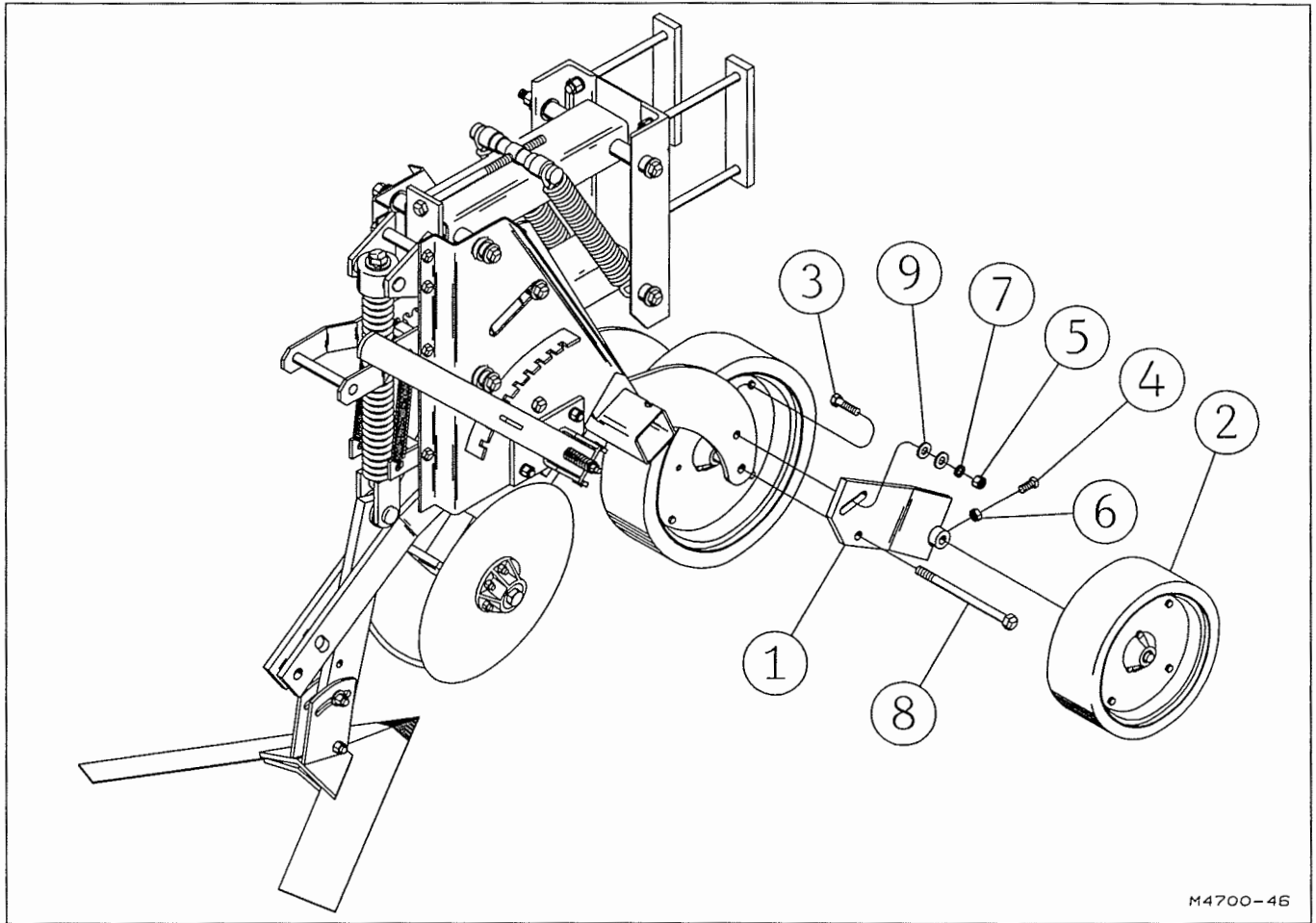
M4700-45

## FOR MODELS - ALL

5/97

Item	Part Number	Part Description	Qty.
1	4700-0-37	Gauge Wheel Bracket	2
2	62-424	5/8NC x 1-1/2" GD. 5 Cap Screw	2
3	62-569	1/2NC x 1-1/2" GD. 5 Cap Screw	2
4	63-106	1/2NC Hex Nut	2
5	63-109	5/8NC Hex Nut	3
6	64-107	1/2" STD. Lock Washer	2
7	64-109	5/8" STD. Lock Washer	3
8	52-512	4" x 16" Smooth Presswheel	1
9	4700-41-1	Spacer (2" Long)	2
10	62-433	5/8NC x 7-1/2" GD5 Cap Screw	1

# OFFSET WHEEL ASSEMBLY



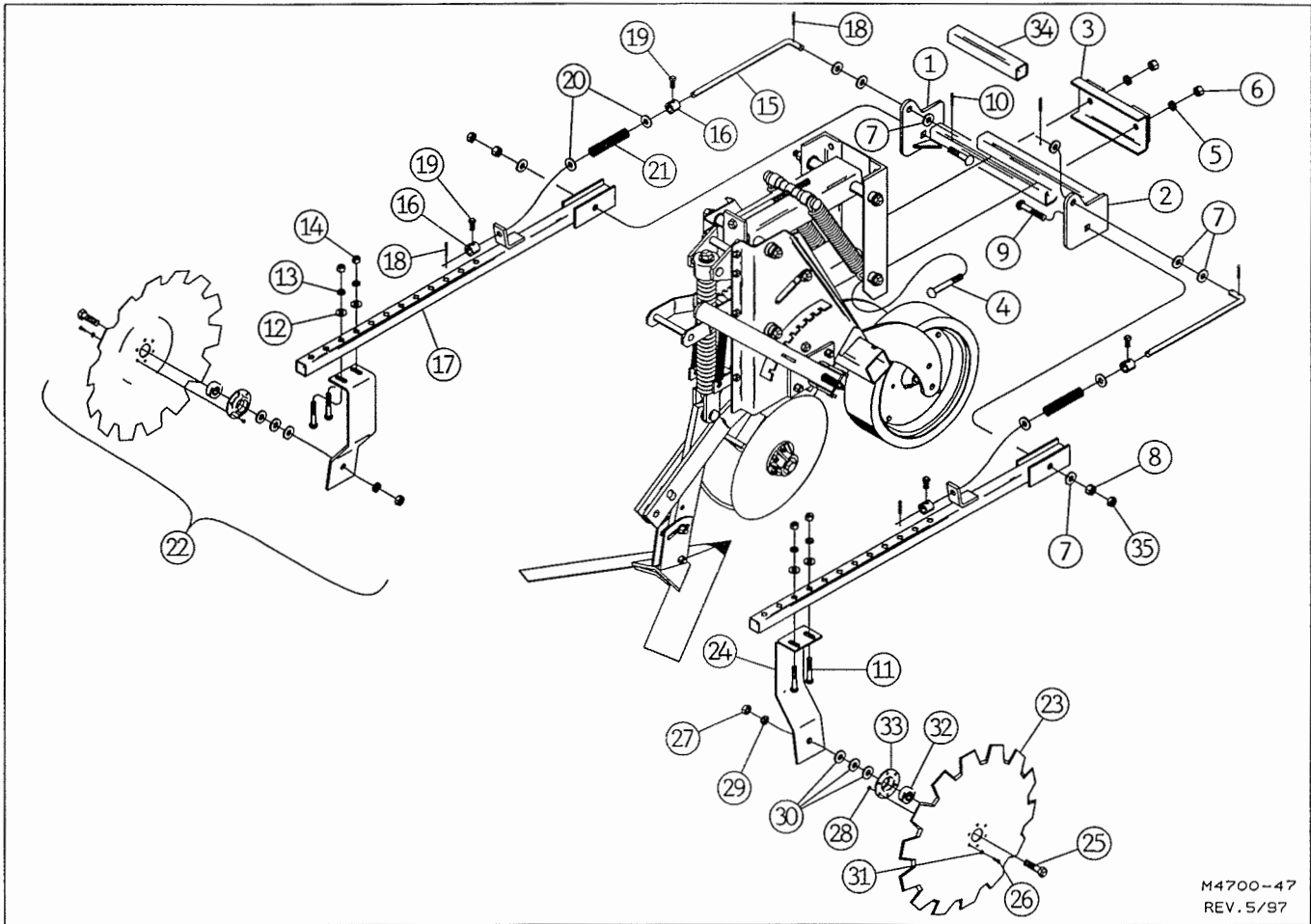
M4700-46

FOR MODELS - ALL

5/97

Item	Part Number	Part Description	Qty.
1	4700-83-0	Left Offset Gauge Weldment (Shown)	1
	4700-84-0	Right Offset Gauge Weldment (Opposite)	1
2	52-500	4" x 12" Smooth Presswheel Assembly	1
3	62-414	1/2NC x 1-3/4" GD. 5 Cap Screw	1
4	62-559	1/2NC x 1" Square Head Cup Point Set Screw	1
5	63-106	1/2NC Hex Nut	1
6	63-165	1/2NC Hex Jam Nut	1
7	64-107	1/2" STD. Lock Washer	1
8	62-563	5/8NC x 8" GD. 5 Cap Screw	1
9	64-108	1/2" STD. Flat Washer	2

# DISC SHIELD ASSEMBLY



M4700-47  
REV. 5/97

## FOR MODELS – ALL 4700 & 4750 Models

4/93

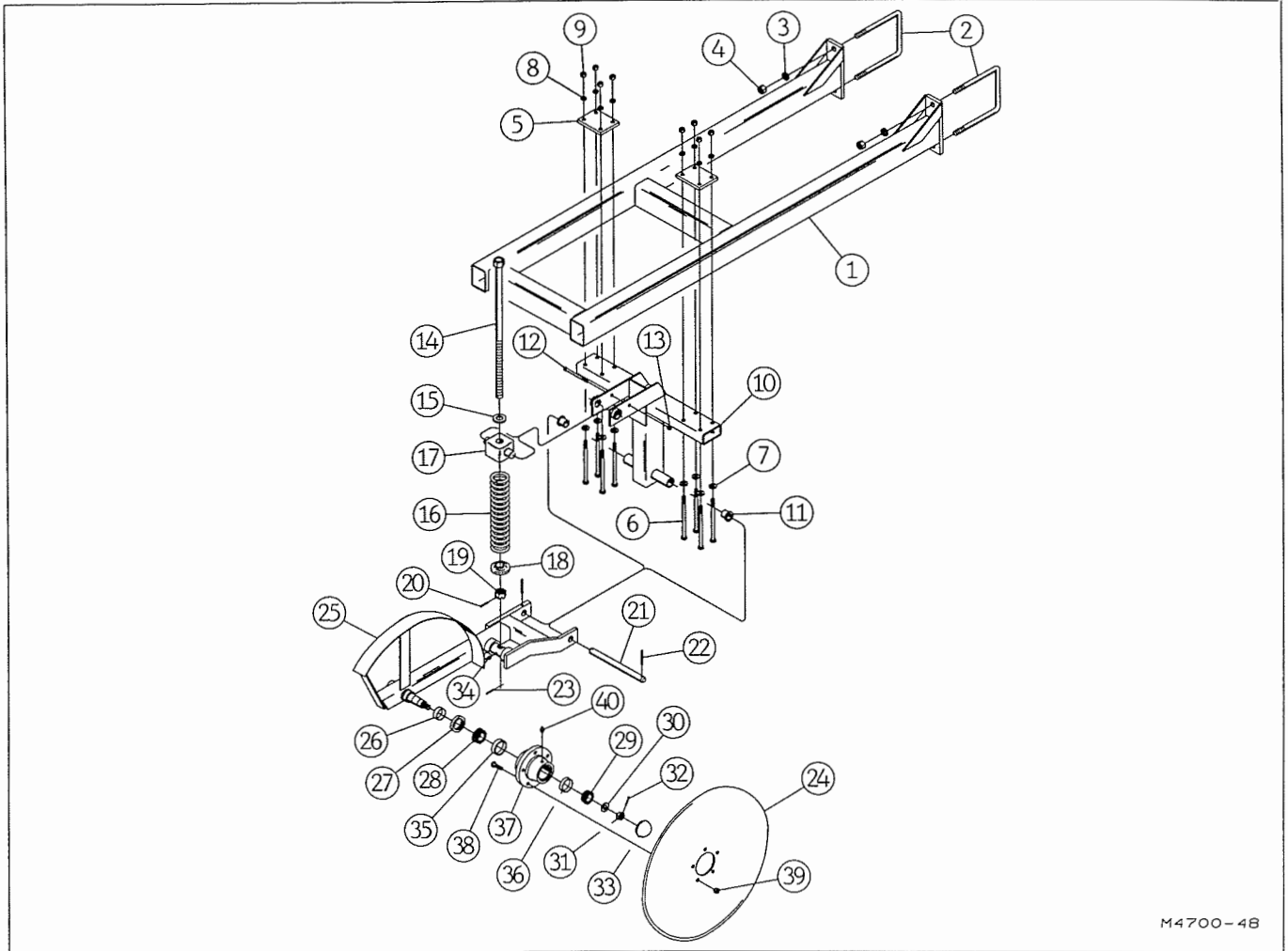
Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	■ 4700-9-0	Left Mounting Weldment	1	23	30-210	20" Notched Shield Blade	1
	● 4700-11-0	Left Mounting Weldment	1	24	4700-0-32A	Long Bearing Arm	1
2	■ 4700-8-0	Right Mounting Weldment	1	25	62-169	5/8NC x 2" GD. 5 Cap Screw	1
	● 4700-10-0	Right Mounting Weldment	1	26	62-477	#12NC x 5/8" GD.5 Round Head Rib Neck Bolt	6
3	★ 4700-21-0	Channel Weldment	1	27	63-154	5/8NC Hex Jam Nut	1
4	★ 62-608	5/8NC x 4" GD. 5 Carriage Bolt	2	28	63-156	#12NC Lock Nut	6
5	★ 64-109	5/8" STD. Lock Washer	2	29	64-109	5/8" STD. Lock Washer	1
6	★ 63-109	5/8NC Hex Nut	2	30	64-146	5/8" SAE Flat Washer	3
7	64-110	5/8" STD. Flat Washer	6	31	64-183	#12 STD. Flat Washer	6
8	63-110	5/8NC Self Locking Nut	2		5210-485-0A	Bearing Assembly	1
9	62-632	5/8NC x 3-1/2"GD5 Carriage Bolt	2	32	40-138	Bearing	1
10	60-626	3/16" DIA. x 1-1/2" Roll Pin	2	33	5210-485-1A	Disc Bearing Cap	1
11	62-602	1/2NC x 3" GD. 5 Carriage Bolt	4	34	★ 4700-0-25	Spacer Box (Used on 1/2 Row)	1
12	64-108	1/2" STD. Flat Washer	4	35	63-154	5/8NC Hex Jam Nut	2
13	64-107	1/2"STD. Lock Washer	4				
14	63-106	1/2NC Hex Nut	4				
	4700-81-0	Mounting Tube Assembly	2				
15	4700-0-21A	Rod	1				
16	4700-0-22	Lock Sleeve	2				
17	4700-26-0A	Mounting Tube Weldment	1				
18	60-626	3/16" DIA. x 1-1/2" Roll Pin	2				
19	62-332	1/2NC x 3/4" Square Head Cup Point Set Screw	2				
20	64-110	5/8" STD. Flat Washer	2				
21	76-173	Compression Spring	1				
22	4700-82-0	Shield & Bearing Arm Assembly	2				

■ Narrow Row Spacing

● Wide Row Spacing

★ Part of 4700-28-0 Accessory Channel & Box Assembly can be used if disc shield is not required on outside of half row gangs.

# REAR STABILIZER ASSEMBLY

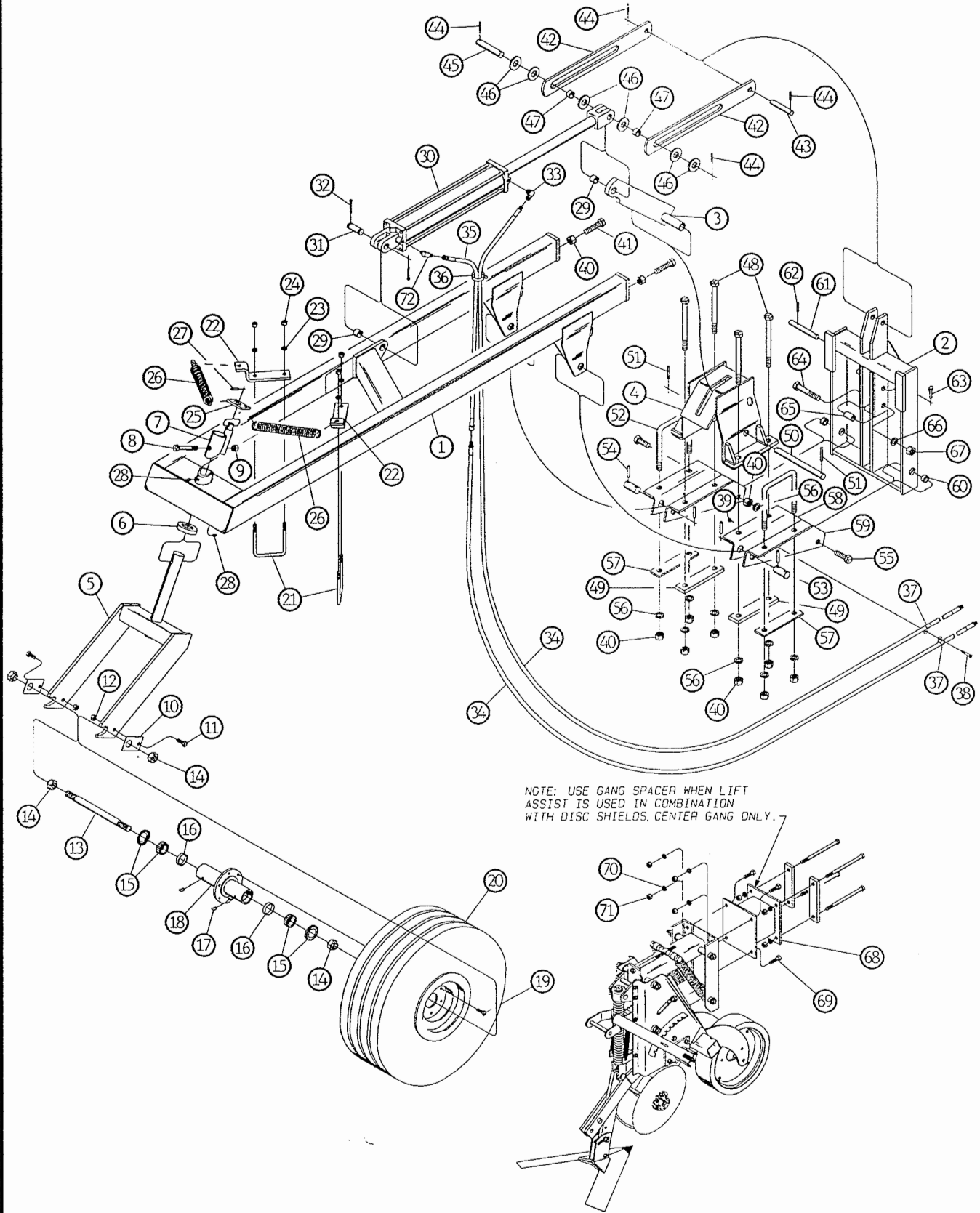


M4700-48

## FOR MODELS - ALL 4700 & 4750 Models

3/98

Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	4700-92-0	Stabilizer Frame Weldment	1	22	60-608	1/4" DIA. x 2-1/2" Roll Pin	2
2	61-190	3/4" DIA. U-Bolt (7 x 7 Tool Bar)	2	23	60-626	3/16" DIA. x 1-1/2" Roll Pin	1
3	64-112	3/4" STD. Lock Washer	4	24	30-211	27" DIA. Coulter Blade	1
4	63-112	3/4NC Hex Nut	4		4700-93-0	Coulter Arm & Hub Assembly	1
5	4700-0-33	Bolt Plate	2	25	4700-118-0	Repair Coulter Arm Wldmnt	1
6	62-162	1/2NC x 7-1/2" GD5 Cap Screw	8	26	53-111	Wear Sleeve 2"OD x 1.87ID	1
7	64-108	1/2" STD. Flat Washer	8	27	42-115	Seal	1
8	64-107	1/2" STD. Lock Washer	8	28	41-112	Cone (Timken #LM-48548)	1
9	63-106	1/2NC Hex Nut	8	29	41-117	Cone (Timken #LM-67048)	1
	4700-90-0	Stabilizer Spring Mount Assembly	1	30	64-161	3/4" SAE HT Flat Washer	1
10	4700-91-0	Stabilizer Mount Weldment	1	31	63-201	3/4NF Slotted Hex Nut	1
11	53-134	Flanged Wear Sleeve	2	32	60-725	5/32"DIA. x 1-1/2" Cotter Pin	1
12	62-562	3/8NC x 4-1/2" GD. 5 Bolt	1	33	52-305	Hub Cap	1
13	63-134	3/8NC Nylon-Top Lock Nut	1	34	65-101	1/8" STD. Zerk	1
14	6127-96-0	Adjustment Screw Weldment	1		49-105	Hub Assembly	1
15	64-155	1" SAE Flat Washer	1	35	41-208	Cup (Timken #LM-48510)	1
16	76-132	Compression Spring	1	36	41-215	Cup (Timken #LM-67010)	1
17	3127-30-1	Trunnion Casting	1	37	4990-114-0	Repair Hub Assembly	1
18	6127-90-1	Spring Washer	1	38	62-286	Wheel Bolt	5
19	63-120	1NC Slotted Hex Nut	1	39	63-209	1/2NF Lug Nut	5
20	60-626	3/16" DIA. x 1-1/2" Roll Pin	1	40	65-101	1/8" STD. Zerk	1
21	4700-0-34	Pivot Pin	1				



M4700-49  
 Revised 12/94

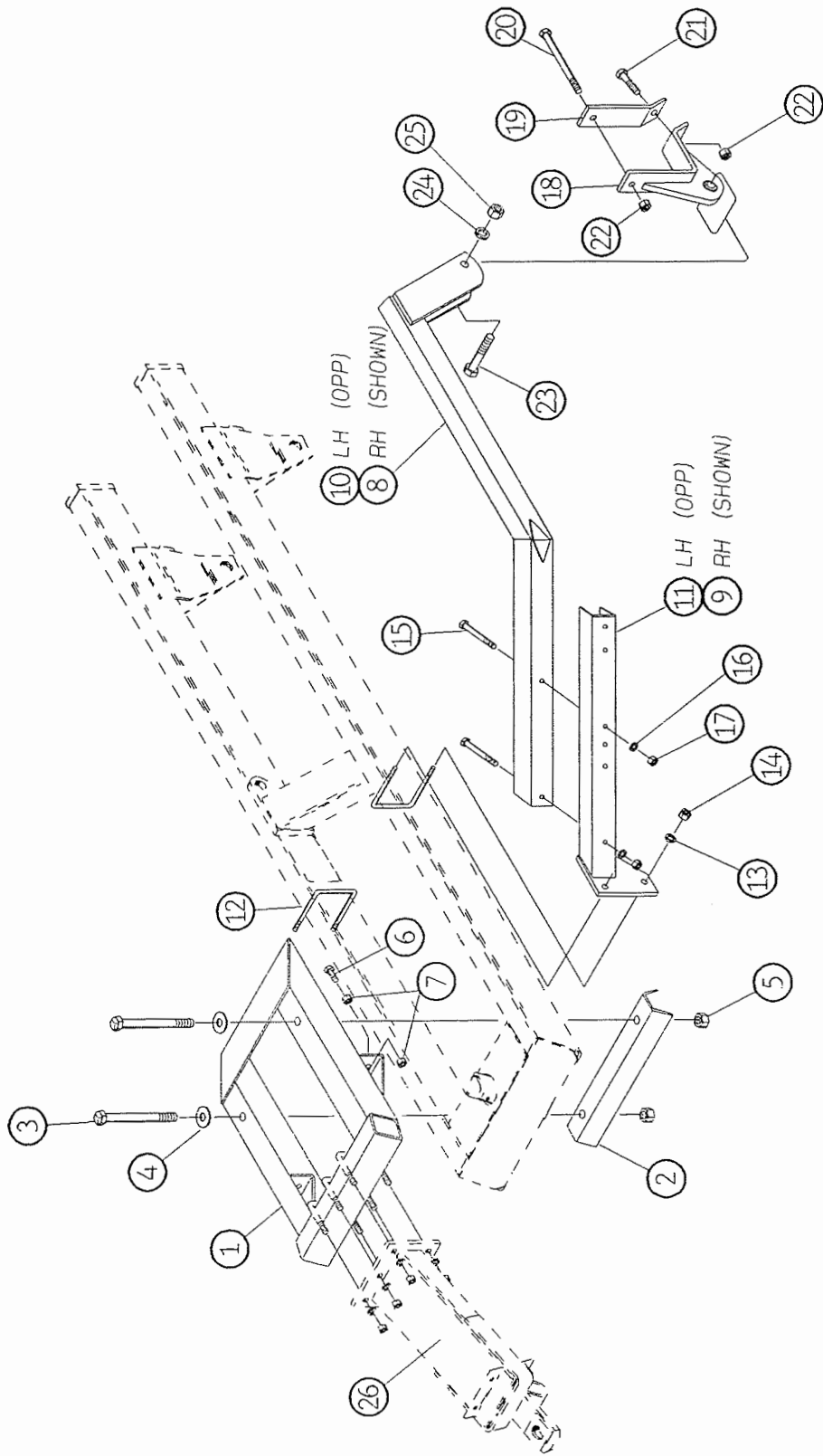
# REAR WHEEL ASSIST ASSEMBLY

FOR MODELS -- 4708-0F3, 4708-0F4, 4712-0F3, 4712-0F4, 4716-0F3, 4758-0R3, 4762-0F3

5/97

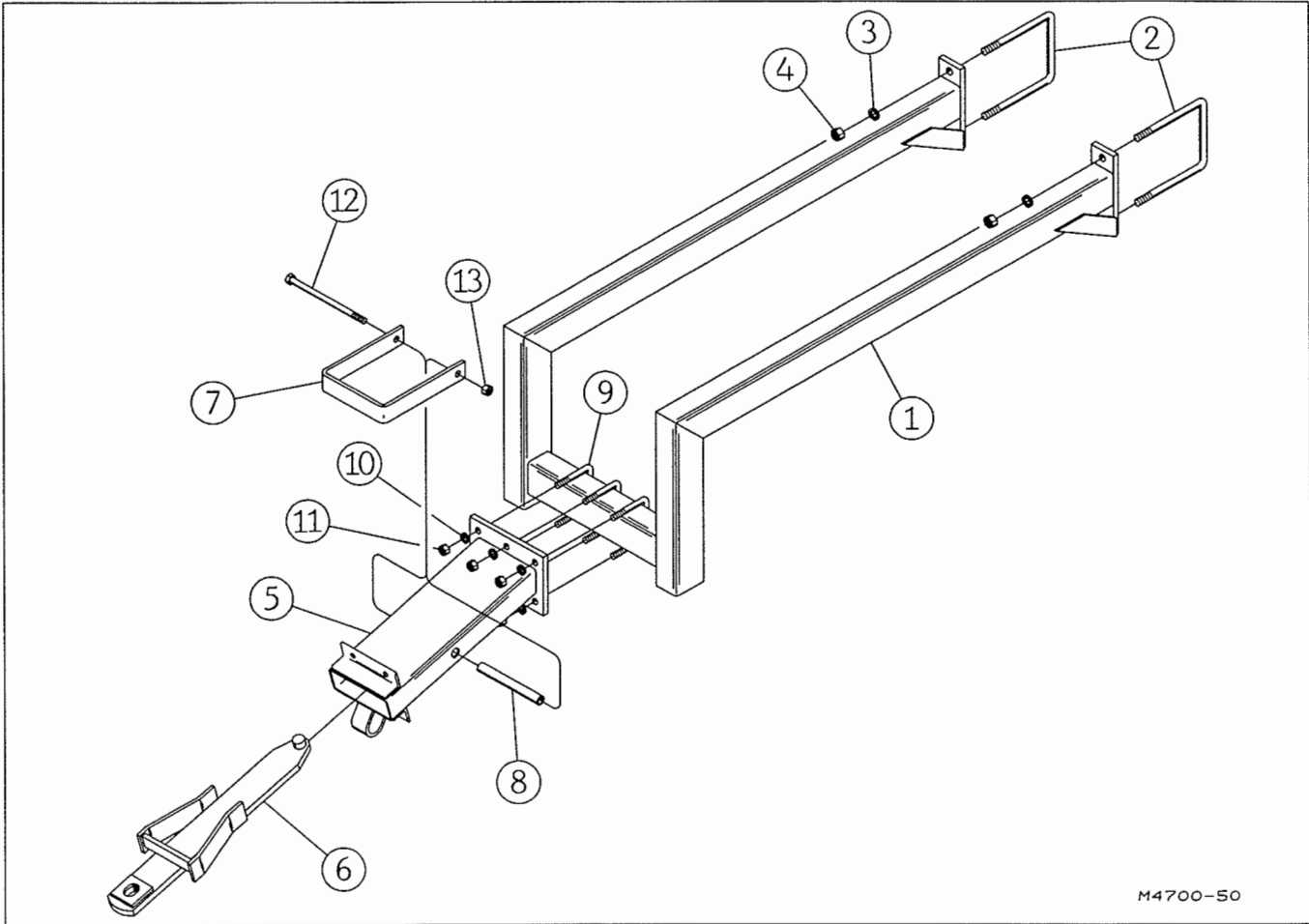
Item	Part Number	Part Description	Qty.	Item	Part Number	Part Description	Qty.
1	4716-13-0	Assist Wheel Frame Weldment	1	48	62-585	1NC x 11" GD. 5 Machine Bolt	4
2	4716-14-0A	Top Hitch Frame Weldment	1	49	4716-0-2	Bolt Strap	2
3	4716-15-0	Pivot Lug Weldment	1	50	4716-0-9	Long Pivot Bolt	1
4	4716-16-0A	Pivot Stop Weldment	1	51	60-618	3/8" DIA. x 3" Roll Pin	2
5	4616-19-0A	Castor Wheel Frame Weldment	1	52	61-206	1" DIA. U-Bolt	2
6	4616-0-9	Load Spacer Casting	1	53	4716-0-5	Short Pin	2
7	4616-23-0	Spring Lock Weldment	1	54	60-621	1/2" DIA. x 2-1/2" Roll Pin	4
8	62-210	3/4NC x 6" GD. 5 Cap Screw	1	55	62-236	1NC x 2-1/2" GD. 5 Cap Screw	2
9	63-114	3/4NC Self Locking Nut	1	56	64-118	1" STD. Lock Washer	10
10	4616-0-8	Axle Plate	2	57	4716-0-8	U-Bolt Strap	2
11	62-424	5/8NC x 1-1/2" GD. 5 Cap Screw	2	58	4716-0-3	Left Angle	2
12	63-152	5/8NC Nylon-Top Lock Nut	2	59	4716-0-4	Right Angle	2
	4616-9-0	Hub and Axle Assembly	1	60	4616-0-5	Spacer	2
13	4616-9-1	Spindle	1	61	★ 4700-66-2	Top Link Pin	1
14	4616-9-2	1-1/4NF Special Nut	4	62	★ 60-615	3/8" DIA. x 2" Roll Pin	1
15	41-121	Cone/Seal Assm #LM48500LA	2	63	★ 60-102	Klick Pin	1
16	41-208	Cup #LM48510	2	64	★ 62-504	1NC x 5-1/2" GD. 5 Cap Screw	1
17	65-104	1/4 x 67-1/2° Zerk	2	65	★ 5210-101-8	Top Link Bushing	1
18	4616-8-0	Hub Weldment	1	66	★ 64-118	1" STD. Lock Washer	1
19	62-295	9/16NF x 1-1/8" GD. 5 Bolt	6	67	★ 63-117	1NC Hex Nut	1
20	1000-10580-0	Wheel Assembly	1		4700-110-0	Gang Spacer Assembly	1
21	61-223	5/8" DIA. U-Bolt	2	68	4700-109-0	Gang Spacer Weldment	1
22	4716-0-7	Spring Bracket	2	69	62-169	5/8NC x 2" GD. 5 Cap Screw	4
23	64-109	5/8" STD. Lock Washer	4	70	64-109	5/8" STD. Lock Washer	4
24	63-109	5/8NC Hex Nut	4	71	63-109	5/8NC Hex Nut	4
25	4616-0-18	Spring Pivot	1	72	25-301	O-Ring 37° Flare 90° Ell	1
26	4616-0-19	Extension Spring	2				
27	60-615	3/8" DIA. x 2" Roll Pin	1				
28	65-101	1/8NPT STD. Zerk	2				
29	53-101	Wear Sleeve 1.500.D. x 1.281.D.	2				
30	21-102	4" x 24" Hydraulic Cylinder	1				
31	21-741	Clevis Pin	1				
32	21-639	Cotter Pin	2				
33	25-320	O-Ring 37° Flare 90° Female Ftg	1				
34	4990-75-0	92" Hose With Red Grip	1				
	4990-76-0	92" Hose with Yellow Grip	1				
35	24-360R	Hose 1/2" x 20" JIC Swivel Ends	1				
36	25-126	27-1/2" Black Panduit Stay Strap	2				
37	25-127	3/4" I.D. Hose clamp	2				
38	62-544	3/8NC x 2" GD5 Cap Screw	1				
39	63-134	3/8NC Nylon-Top Lock Nut	1				
40	63-117	1NC Hex Nut	12				
41	62-243	1NC x 4" Full Thread Bolt	2				
42	4716-0-6	Cylinder Link	2				
43	4616-0-12A	Top Link Pin	1				
44	60-606	1/4" DIA. x 2" Roll Pin	4				
45	4716-0-10	Cylinder Link Pin	1				
46	64-126	1-1/4" STD. Flat Washer	6				
47	53-113	Waar Sleeve 1.500.D. x 1.281.D.	2				

★ These parts are included in the 3-Point Hitch Group





# TRAIL HITCH ASSEMBLY



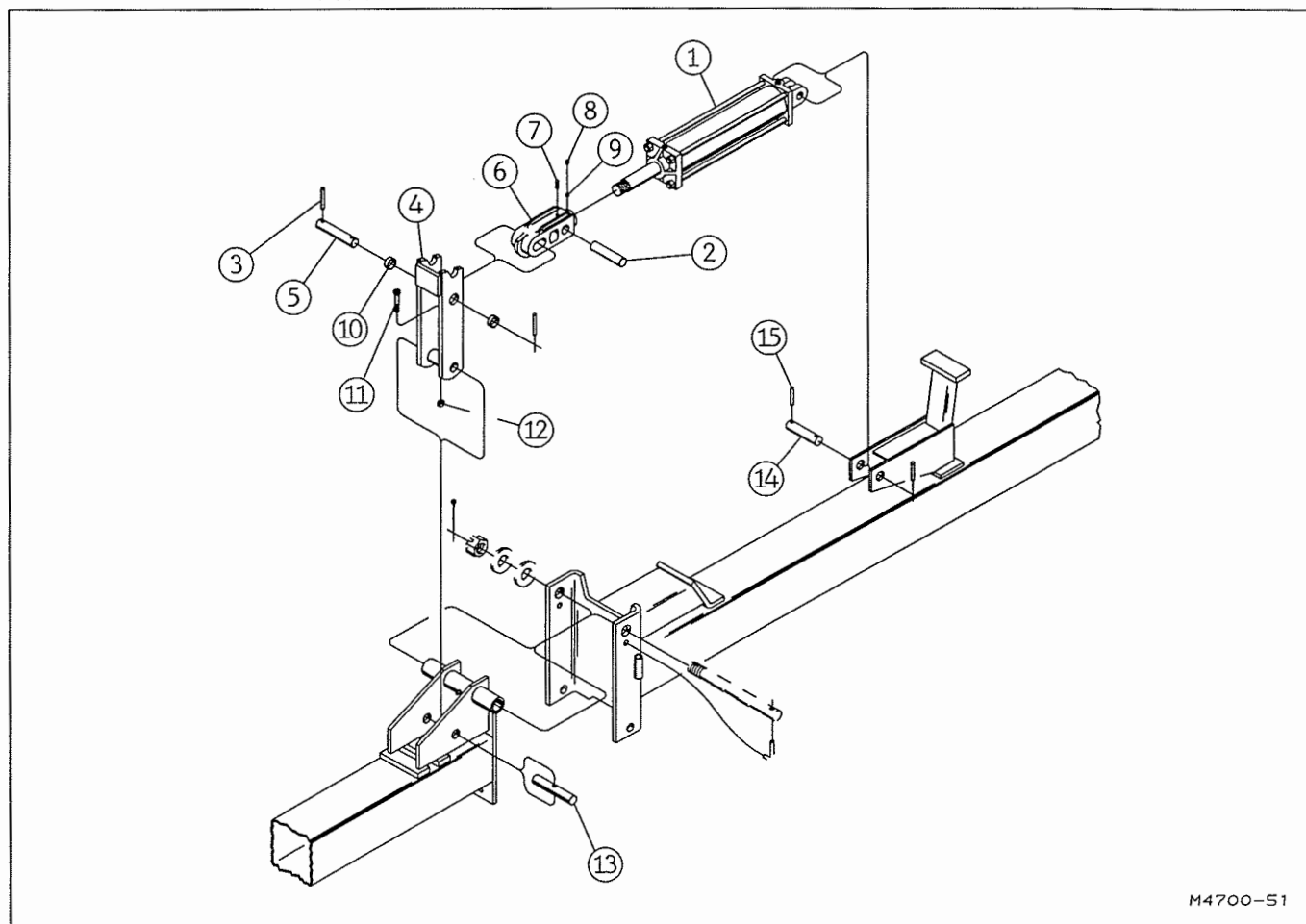
M4700-50

## FOR MODELS - ALL

5/97

Item	Part Number	Part Description	Qty.
1	4700-310-0A	Hitch Extension Weldment	1
2	61-190	3/4" DIA. U-Bolt (For 7" x 7" Tool Bar)	2
3	64-112	3/4" STD. Lock Washer	4
4	63-112	3/4NC Hex Nut	4
	4700-302-0	Hitch Assembly	1
5	4700-303-0	Hitch Frame Weldment	1
6	4700-304-0	Swing Tongue Weldment	1
7	4700-302-1	Latch Bar	1
8	4700-302-2	Spacer Tube	1
9	61-155	5/8" DIA. U-Bolt	3
10	64-109	5/8" STD. Lock Washer	6
11	63-109	5/8NC Hex Nut	6
12	62-613	5/8NC x 10" GD. 5 Machine Bolt	1
13	63-110	5/8NC Self Locking Nut	1

# WING LIFT CYLINDER ASSEMBLY

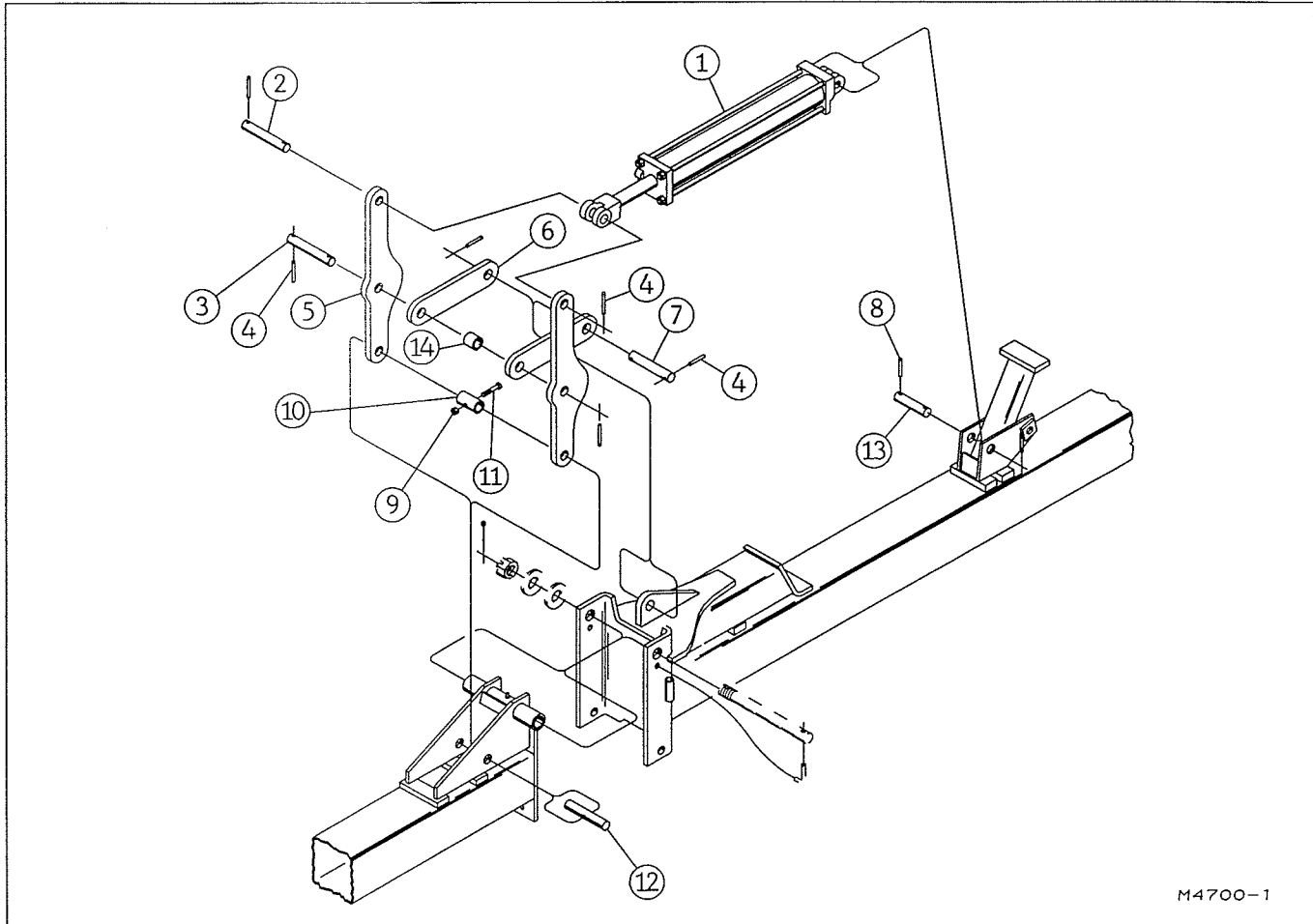


**FOR MODELS -** 4706-0F4, 4708-0F3, 4708-0F4, 4636-0F4, 4738-0F3, 4738-0F4

5/97

Item	Part Number	Part Description	Qty.
	4606-50-0A	Wing Lift Cylinder Assembly	2/Unit
1	21-140	4" x 16" Prince Hydraulic Cylinder (No Clevis)	1
2	4260-81-1	1-1/4"DIA. x 5" Pin	1
3	60-618	3/8" DIA. x 3" Roll Pin	2
4	4606-57-0A	Wing Lift Arm Weldment	1
5	4260-80-3	Pin	1
6	4260-81-0	Cylinder Rod End	1
7	60-608	1/4"DIA. x 2-1/2" Roll Pin	1
8	62-324	3/8NC x 3/8" Cup Point Set Screw	1
9	21-407	Nylon Clevis Lock Plug	1
10	53-109	Wear Sleeve	2
11	62-372	1/2NC x 2-1/2" GD. 5 Cap Screw	2
12	63-102	1/2NC Self Locking Nut	2
13	4600-0-26	Wing Lift Pin	2
14	4330-0-5	Short Pin	2
15	60-617	3/8" DIA. x 2-1/2" Roll Pin	4

# WING LIFT CYLINDER ASSEMBLY



M4700-1

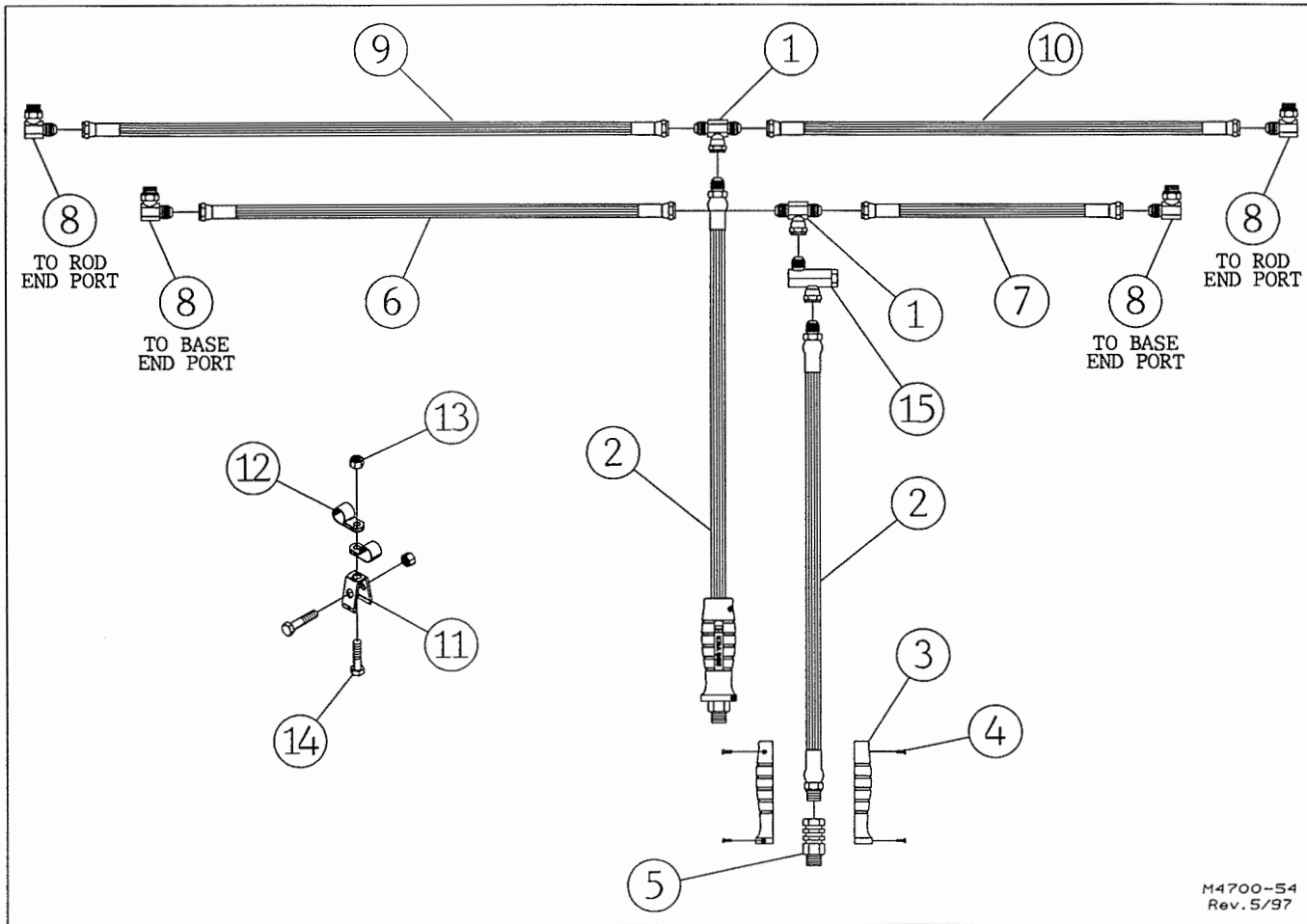
**FOR MODELS - 4712F3, 4712F4, 4716F3, 4742F3, 4762F3**

5/97

Item	Part Number	Part Description	Qty.
1	21-172	4" x 32" Prince Hydraulic Cylinder	1
2	4712-101-5	Pin 1-1/4" x 5-1/4"	1
3	4712-101-3	Pin 1-3/8" x 5-1/4"	1
4	60-606	1/4" x 2" Roll Pin	6
5	4712-101-7	Lug	2
6	4712-101-6	Link	2
7	4712-101-4	Pin 1-3/8" x 3-1/2"	2
8	60-617	3/8" DIA. x 2-1/2" Roll Pin	2
9	63-107	1/2NC Self Locking Nut	1
10	4712-101-1	Sleeve 1-3/4" x 2-5/8" Long	1
11	62-372	1/2NC x 2-1/2" GD. 5 Cap Screw	1
12	4600-0-26	Pin 1-1/4" x 6-1/2"	1
13	4330-0-5	Pin 1-1/4" x 5"	1
14	4712-101-2	Spacer 2" x 1-3/8" Long	1



# HYDRAULIC HOSE KIT



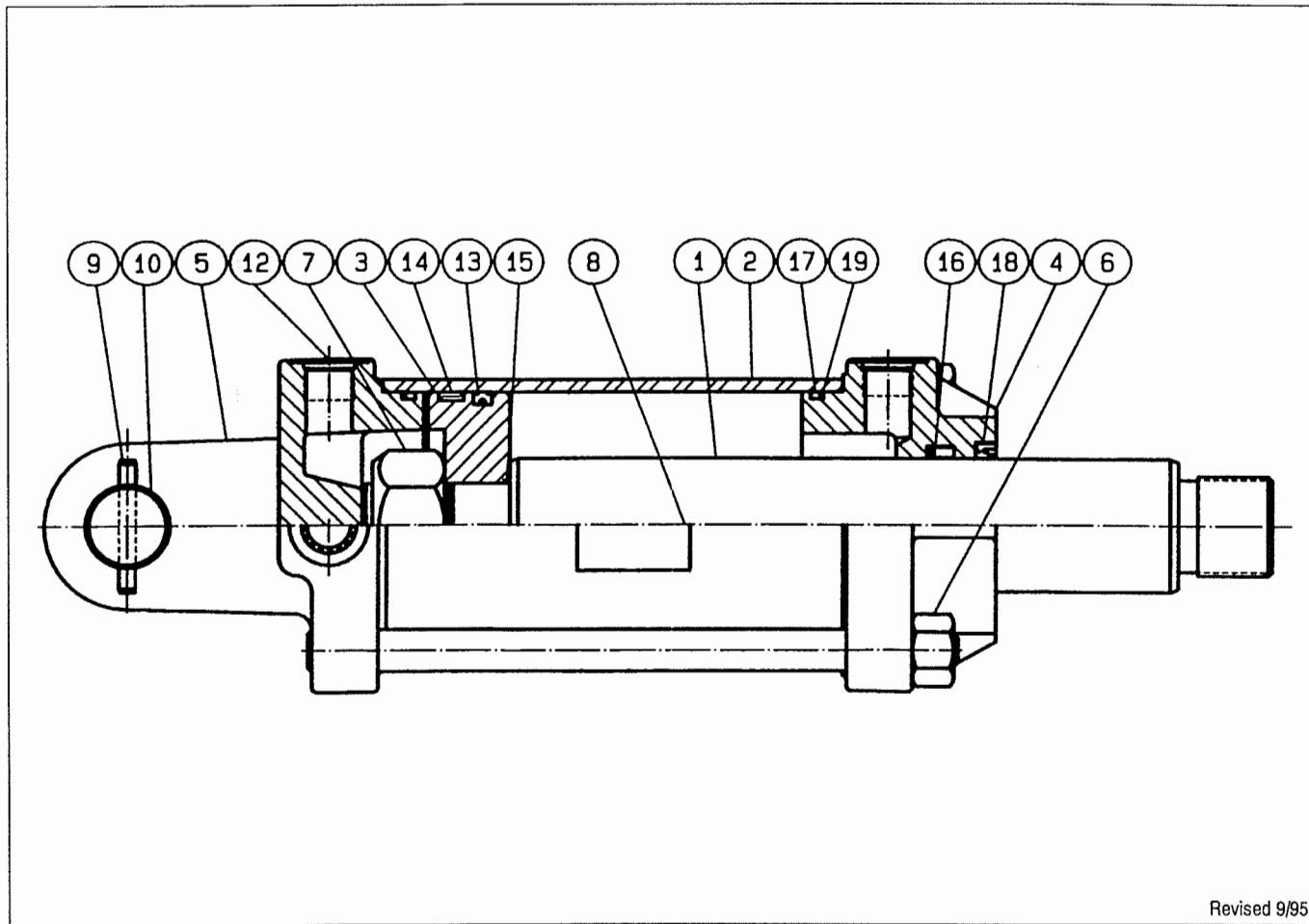
M4700-54  
Rev. 5/97

**FOR MODELS - 4712-0F4, 4716-0F3**

5/97

Item	Part Number	Part Description	Qty.
1	25-373	JIC Male to Female Branch Tee	2
2	24-2104	Hose Assembly 3/8" x 57" 100R2 Rubber 3/4JIC to 3/4ORB	2
3	25-2289	Hose Grip Half, Red	1
	25-2290	Hose Grip Half, Yellow	1
	25-2291	Hose Grip Half, Black	2
4	62-656	Hose Grip Screw	8
5	24-2295	Hose Grip Core Fitting	2
6	24-211R	Hose Assembly 3/8" x 77" (JIC)	1
7	24-290R	JIC Hose 3/8" DIA. x 52" (JIC)	1
8	4956-75-0	25-305 Restrictor & Tag Assembly, 90° Elbow O-Ring	4
9	24-2109R	JIC Hose 3/8" DIA. x 114" (JIC)	1
10	24-214R	JIC Hose 3/8" DIA. x 89" (JIC)	1
11	5210-0-18	Hose Clip (Clips to any tool bar U-Bolt)	2
12	25-127	3/4" I.D. Hose Clamp	4
13	63-134	3/8NC Nylon-Top Lock Nut	4
14	62-111	3/8NC x 1-1/2" GD5 Cap Screw	4
15	25-324	In-Line Restrictor	1

# PRINCE HYDRAULIC CYLINDER ASSEMBLY

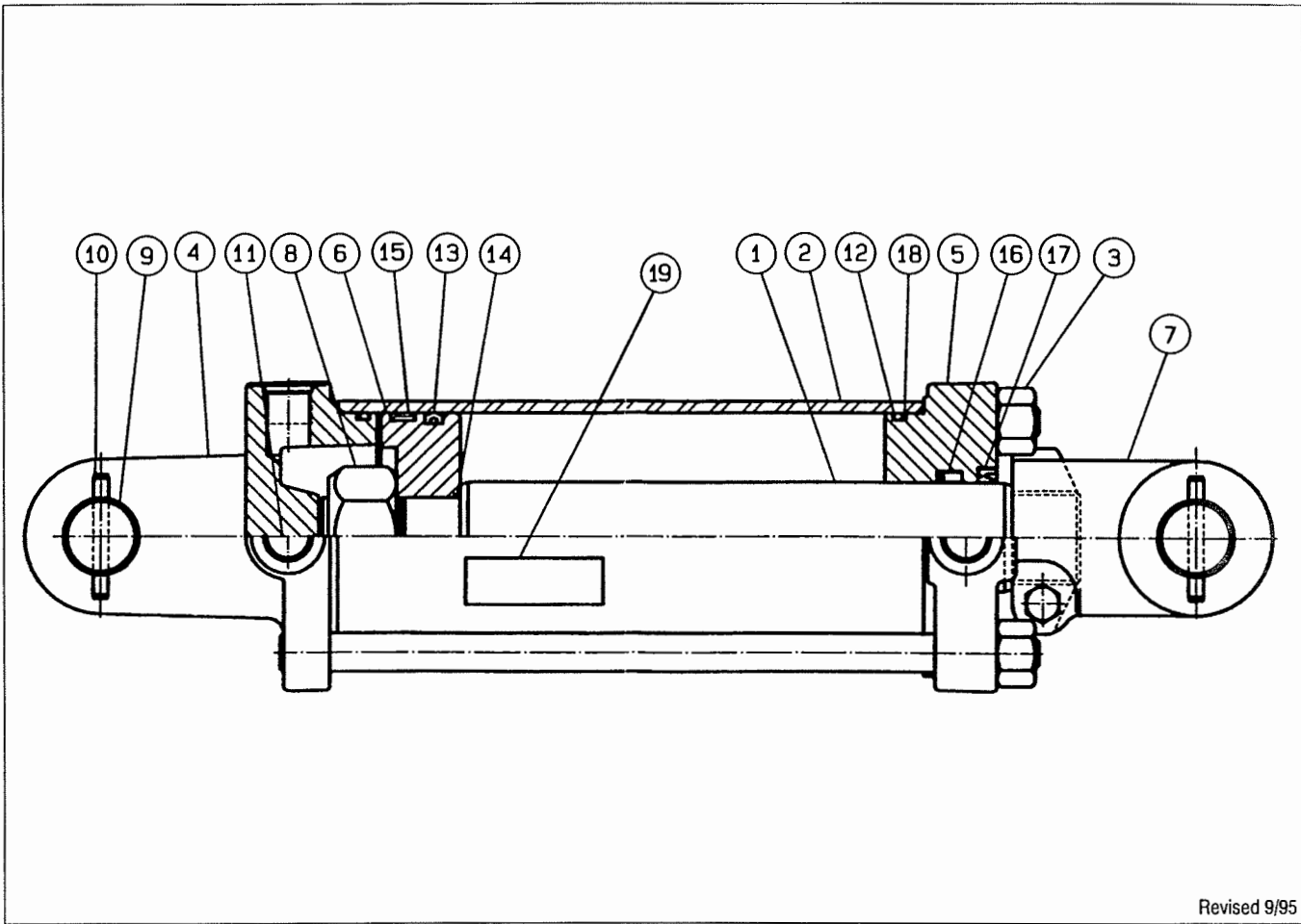


Revised 9/95

21-175 4" x 16" Prince Hydraulic Cylinder Assembly (NO CLEVIS) 16" Stroke 2"DIA. Rod 1/99

Item	Part Number	Part Description	Qty.
1	21-931	Piston Rod	1
2	21-282	Tube	1
3	21-879	Piston	1
4	21-894	Gland	1
5	21-738	Butt	1
6	21-288	Tie Rod	4
7	21-286	Lock Nut	1
8	74-113	Cylinder WARNING Decal	1
9		1/4" DIA. x 2" Roll Pin	2
10	21-872	Clevis Pin	1
11			
12	21-831	Plug	3
13	★	Crown Seal	1
14	★	Bearing Ring	1
15	★	O-Ring	1
16	★	U-Cup	1
17	★	O-Ring	2
18	★	Wiper	1
19	★	Back-Up Washer	2
	21-895	Seal Kit (★ Items included in kit)	

# PRINCE HYDRAULIC CYLINDER ASSEMBLY

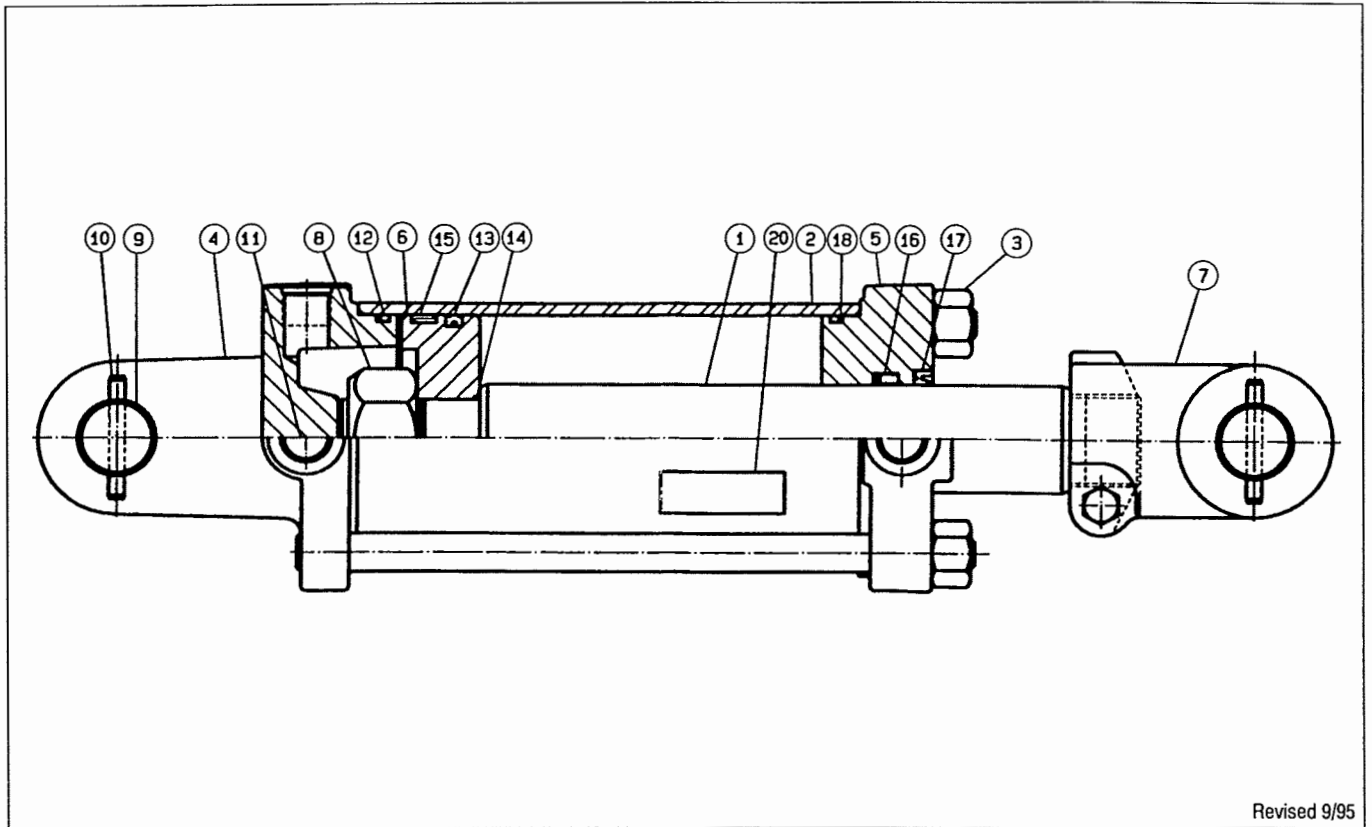


Revised 9/95

21-172      4 " x 32" Prince Hydraulic Cylinder Assembly      1/99  
 Retracted - 42-3/4"      Extended - 74-3/4"      Stroke - 32"      Rod Diameter - 1-3/4"

Item	Part Number	Part Description	Qty.
1	21-900	Piston Rod	1
2	21-266	Tube	1
3	21-526	Tie Rod	4
4	21-738	Butt	1
5	21-878	Gland	1
6	21-879	Piston	1
7	21-507	Clevis Assembly	1
8	21-286	Lock Nut	1
9	21-859	Clevis Pin	2
10		1/4" DIA. x 2" Roll Pin	4
11	21-404	Port Plug	3
12	★	O-Ring	2
13	★	Crown Seal	1
14	★	O-Ring	1
15	★	Bearing Ring	1
16	★	U-Cup	1
17	★	Wiper	1
18	★	Back-Up Washer	2
19	74-113	Cylinder WARNING Decal	1
	21-857	Seal Kit (★ Items included in kit)	

# PRINCE HYDRAULIC CYLINDER ASSEMBLY

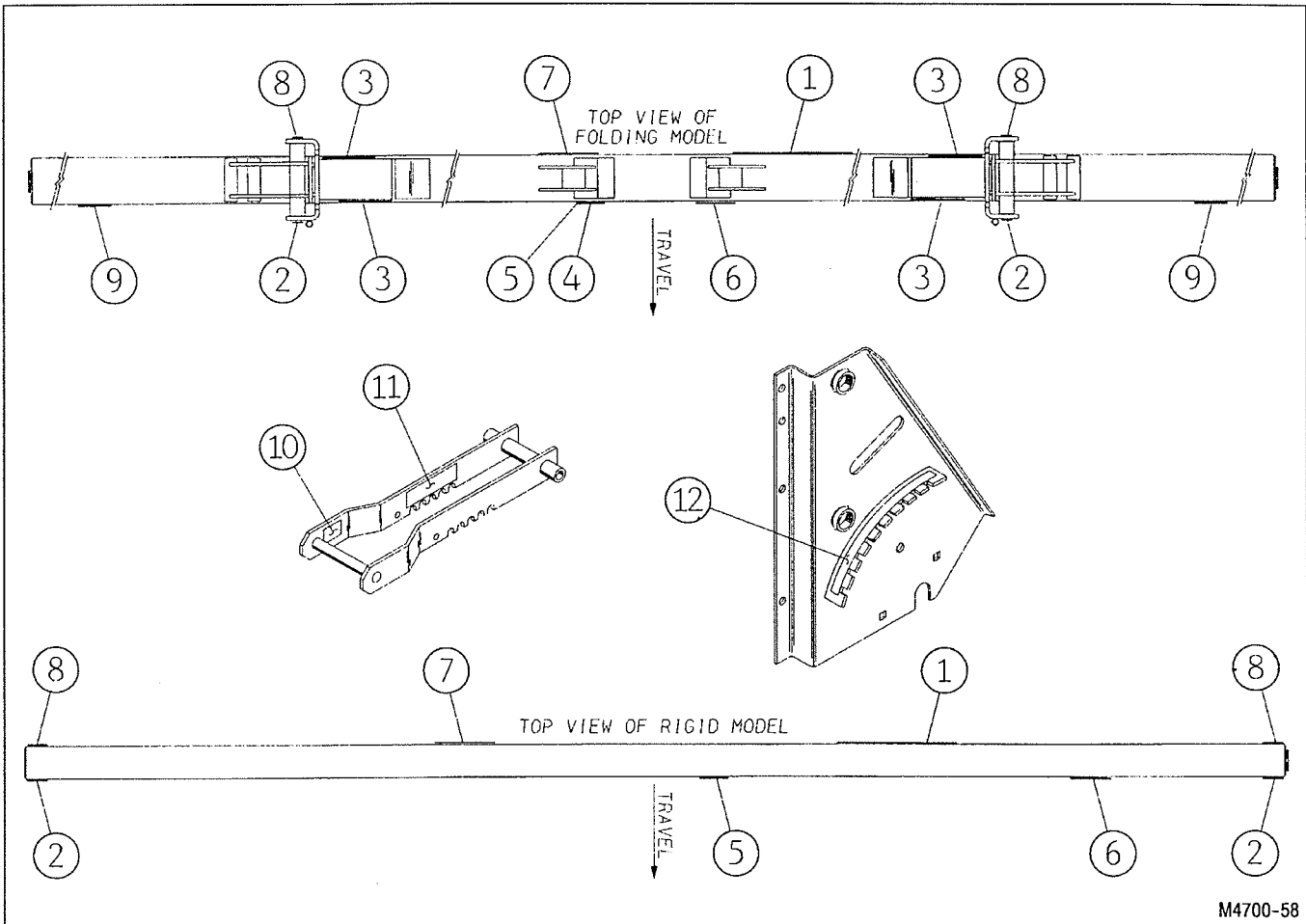


Revised 9/95

21-181      4" x 24" Prince Hydraulic Cylinder Assembly      1/99  
 Retracted - 36-3/4"      Extended - 60-3/4"      Stroke - 24"      Rod Dia. - 1-3/4"

Item	Part Number	Part Description	Qty.
1	21-904	Piston Rod	1
2	21-222	Tube	1
3	21-2046	Tie Rod Assembly	4
4	21-738	Butt	1
5	21-878	Gland	1
6	21-879	Piston	1
7	21-507	Clevis Assembly	1
8	21-286	Lock Nut	1
9	21-859	Clevis Pin	2
10		1/4" DIA. x 2" Roll Pin	4
11	21-831	Port Plug	3
12	★	O-Ring	2
13	★	Crown Seal	1
14	★	O-Ring	2
15	★	Bearing Ring	1
16	★	U-Cup	1
17	★	Wiper	1
18	★	Back-Up Washer	2
19			
20	74-113	Cylinder WARNING Decal	1
	21-857	Seal Kit (★ Items Included in kit)	

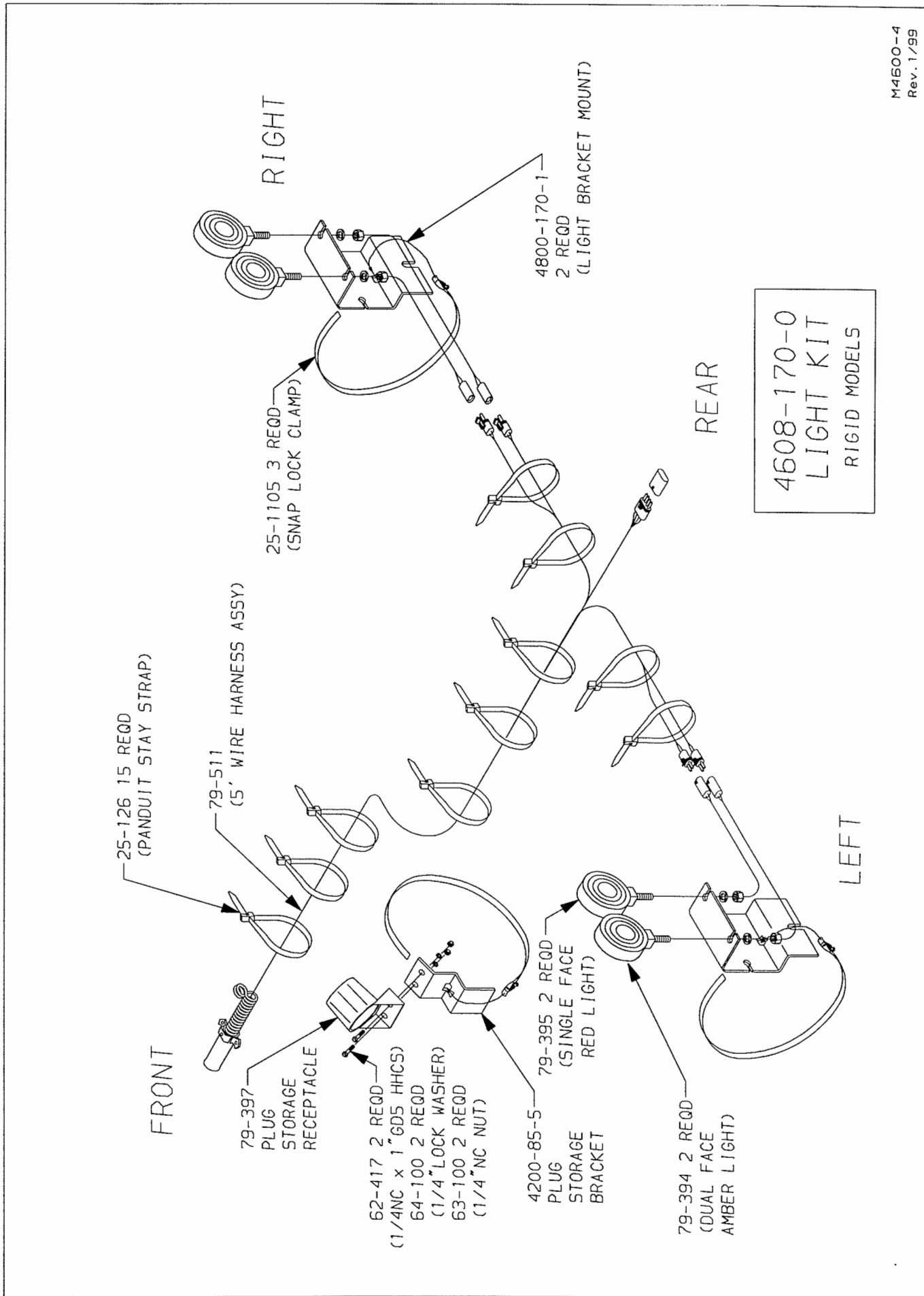
# DECALS & REFLECTORS

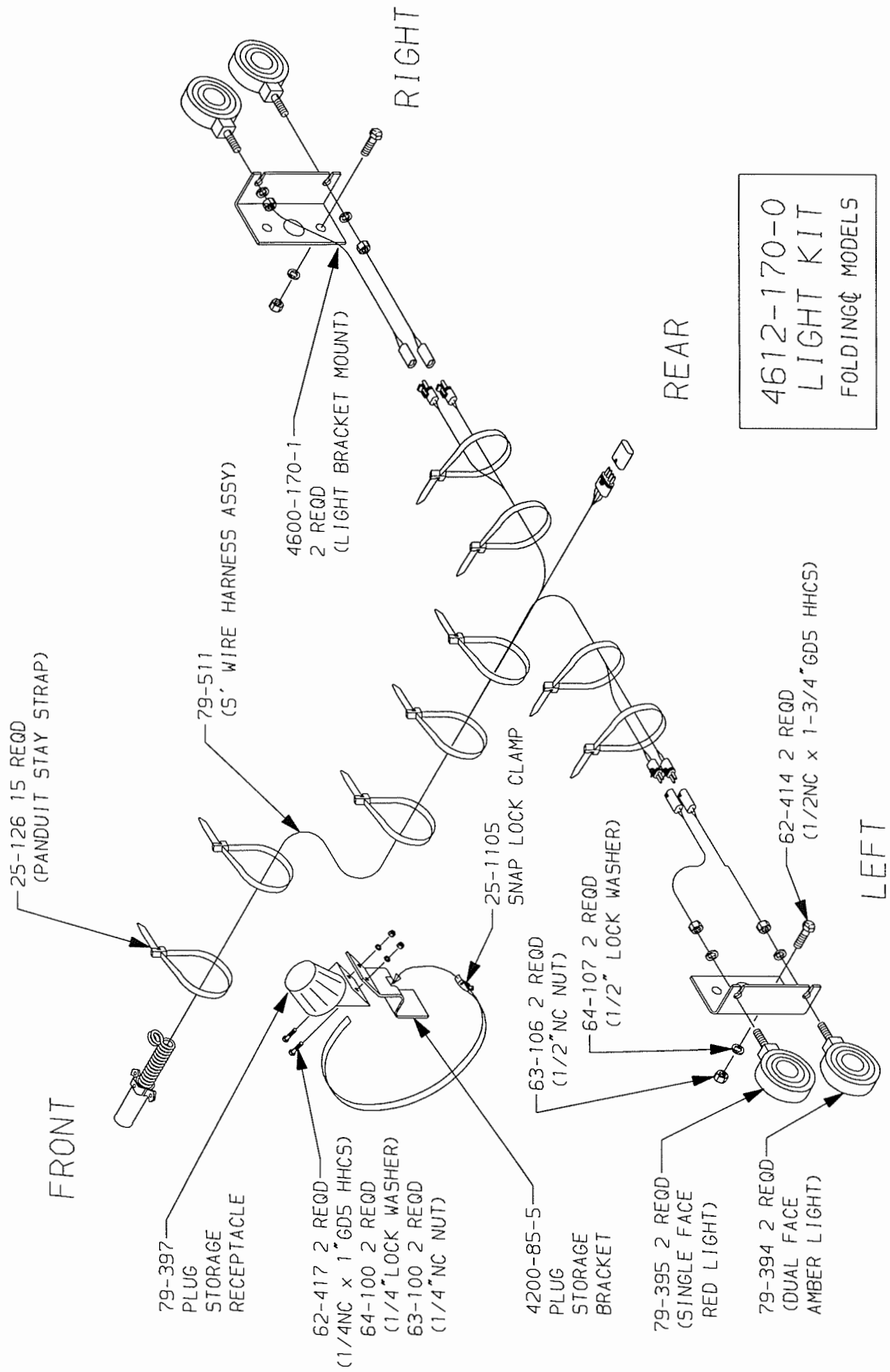


FOR MODELS - ALL

1/99

Item	Part Number	Part Description	Qty.
1	74-100	KRAUSE Decal (18" Long)	3
2	74-107	Amber Reflector	4
3	74-260	Stand Clear Of Wing Decal	3
4	74-276	WARNING - Hydraulic Safety Decal	1
5	74-115	Name Plate	1
6	74-259	Implement Safety Decal	1
7	74-368	4700 SERIES Decal	1
8	74-108	Red Reflector	4
9	74-110	KRAUSE Decal (5" Long)	2
10	74-378	Coulter Depth Decal	1/Gang
11	74-379	Coulter Notch Decal	1/Gang
12	74-380	Sweep Depth Decal	1/Gang





# ASSEMBLY SECTION

THE FOLLOWING SECTION ILLUSTRATES A GENERAL METHOD FOR THE ASSEMBLY OF THIS SERIES KRAUSE TILLAGE TOOL. YOU MUST KNOW THE MODEL NUMBER OF THE UNIT BEING ASSEMBLED WHENEVER MAKING REFERENCE TO THIS SECTION. THE FOLLOWING PICTURES AND DRAWINGS WILL SHOW BOLTS, PINS, NUTS AND ETC., WITH THE DESCRIPTIVE SIZE AND LENGTHS IN THE ACCOMPANYING PARAGRAPH AND A PARTS LISTING REFERENCE PAGE NUMBER. IF ANY DIFFICULTY SHOULD BE ENCOUNTERED DURING THE ASSEMBLY, RECHECK THE ILLUSTRATIONS, ASSEMBLY STEPS AND PARTS LIST DRAWINGS.

# PROPER BOLT USE

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

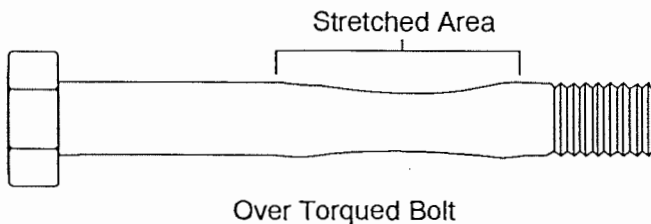
Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Tighten plastic insert or crimped steel-type lock nuts to approximately 110 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

*NOTE: "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.*

BOLT SIZE	BLACK OR PLATED BOLTS		OILED BOLTS	
	GRADE 2	GRADE 5	GRADE 2	GRADE 5
3/8"	20	33	16	26
7/16"	32	52	26	41
1/2"	50	80	39	63
5/8"	100	160	78	125
3/4"	175	280	140	225
7/8"	175	450	140	360
1"	270	675	210	540
1-1/8"	375	850	300	675
1-1/4"	530	1200	425	950
1-1/2"	930	1400	725	1250
<b>TIE ROD TIGHTENING TORQUE</b>				
1-1/2" Dia. Rods		1000 Ft. Lbs.		
1-3/4" Dia. Rods		1400 Ft. Lbs.		
2" Dia. Rods		1600 Ft. Lbs.		



# ASSEMBLY INSTRUCTIONS

STUDY THE NAMES AND LOCATIONS OF THE PARTS AND FAMILIARIZE YOURSELF WITH THE ROW CROP CULTIVATOR BEFORE STARTING THE ASSEMBLY. READING THE STEP BY STEP INSTRUCTIONS THAT FOLLOW WILL BE HELPFUL.

## SAFETY



**READ ALL THE SAFETY DECALS ON THE IMPLEMENT AND REVIEW THE SAFETY FIRST SUGGESTIONS ON THE BACK OF THIS MANUAL TO REFRESH YOUR MEMORY. WATCH FOR THE SAFETY SYMBOL, AND READ THE INFORMATION THAT FOLLOWS. THIS IS FOR YOUR OWN PROTECTION.**

## ASSEMBLY

Select an area for the assembly that will be large enough to accommodate the completed row crop cultivator. The surface of the work area should be as level as possible. Use the proper hand tools to insure proper bolt tightness. Refer to the preceding page titled "Proper Bolt Use" for the recommended torque values for different sizes of bolts.


## PART LOCATIONS

**FRONT** - The front of the frame can be determined by the location of the name plate that has been attached to the front side of the tool bar.

**RIGHT** and **LEFT** sides can be established by standing behind the frame and looking forward toward the front, or the direction of travel.

## ASSEMBLY STEPS

Shown here is one method of assembly that can be accomplished with a small crew of assemblers. Each step of assembly is accompanied by a photograph or illustration with part names and bolt sizes listed.

** Warning: Always attach chains securely. If a chain would break, the recoil action could cause the loose end to whip in any direction and injure any person nearby.**

**Proof load rating of chain must equal or exceed 5 times the weight being lifted.**

## MODEL NUMBER

Know the model number of the row crop cultivator being assembled. Use the model number whenever referring to the assembly, parts listing pages or placement drawings. The number is stamped on the **NAME PLATE** which is located on the front side of the tool bar.



cart.42

Listed below are the parts sacks used in the assembly of the Row Crop Cultivator, along with the location where they are used.

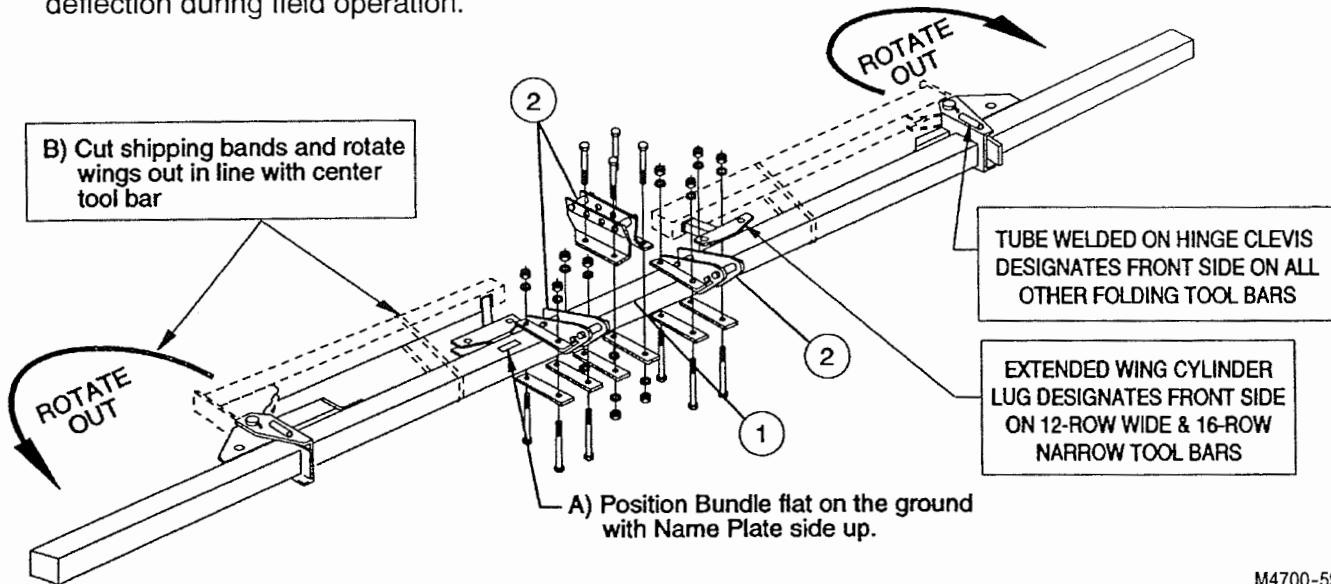
SACK NUMBER	LOCATION USED	SACK NUMBER	LOCATION USED
4700-66-0A 4750-66-0	Bottom Hitch	4716-68-0 66-728	Rear Assist Wheel
4716-65-0	Top Hitch	66-824	Disc Shields
4700-64-0	Hinge Assembly	4700-76-0	Cut Away Disc (Wide)
4650-71-0	Trail Hitch	4700-95-0	Rear Stabilizer
4700-76-0A	Cut Away Disc (Narrow)	4700-63-0 4750-63-0	Gangs and Sweeps

## I. 3-POINT HITCH AND TOOL BAR MOUNTED ON TRACTOR

**⚠ Caution:** Follow this procedure for Wing Models:

- A. Set the tool bar bundle flat on the ground with the nameplate side up.
- B. Cut the shipping bands and rotate the wings out in line with the center tool bar before attaching 3-Point hitch.

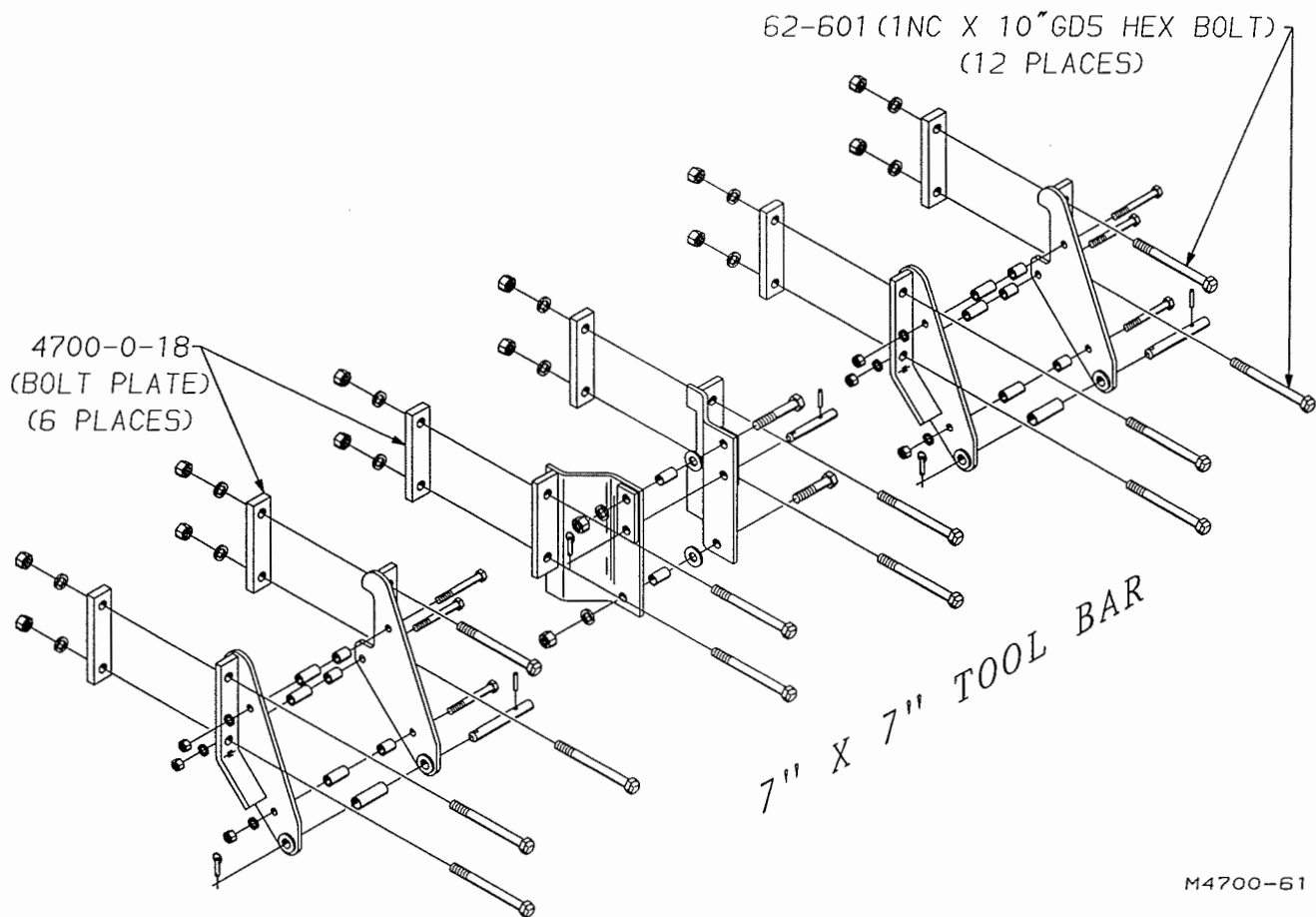
NOTE: 12-Row and 16-Row Center Tool Bars have a slight bow built in to compensate for deflection during field operation.



M4700-59

1. Make a mark at the center of the tool bar for 3-Point assembly. NOTE: The 3-Point Hitch is mounted on the same side as the name plate.
2. Refer to pages A3, A4, & A5, for the correct locations and parts for the Category II or III tractors with or without quick hitch.

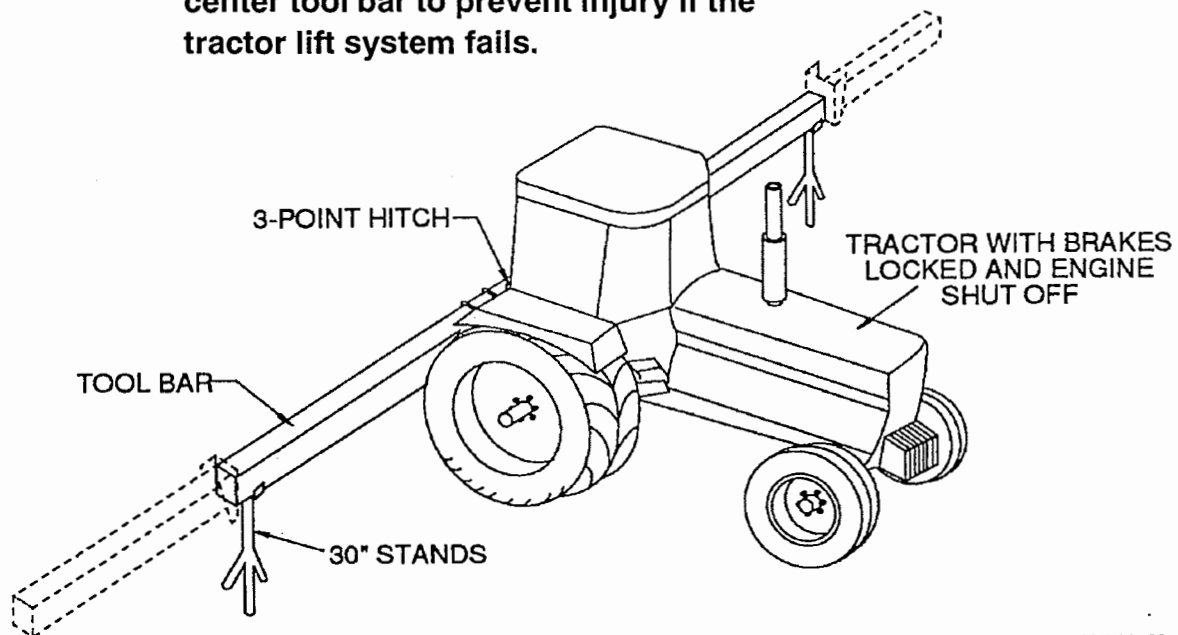
# ALL MODELS



M4700-61

3. Mount the tool bar to a tractor 3-Point Hitch and support the center tool bar (not wings) with stands.

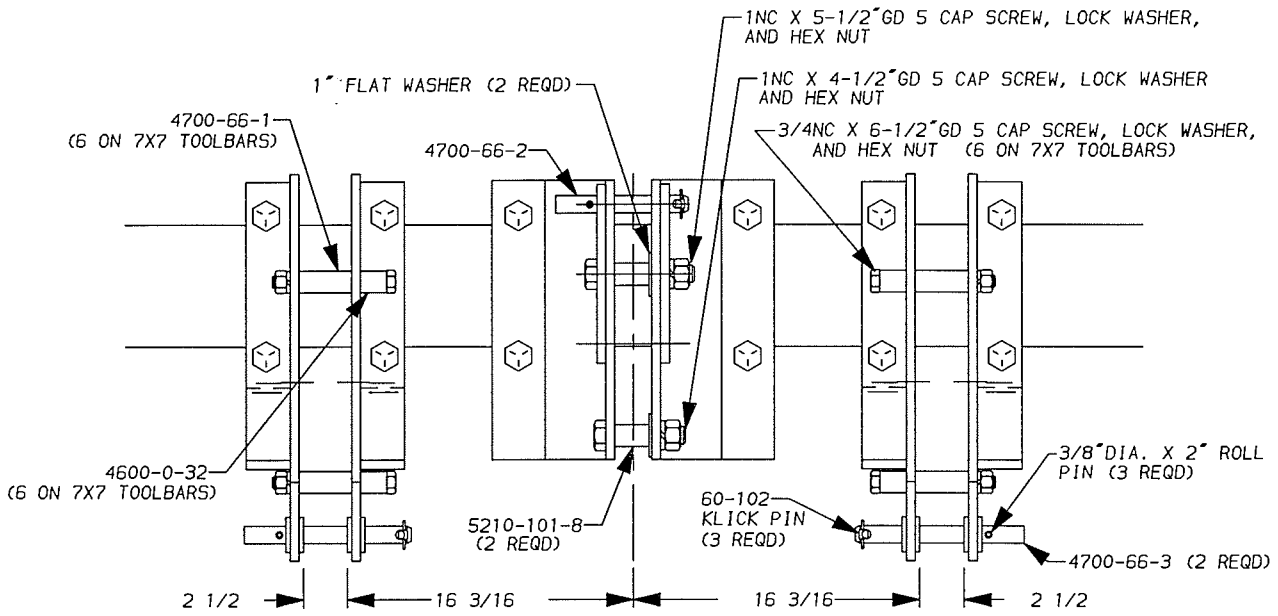
**⚠ Caution:** Lock tractor brakes, turn the engine off, and make sure that the stands are supporting the center tool bar to prevent injury if the tractor lift system fails.



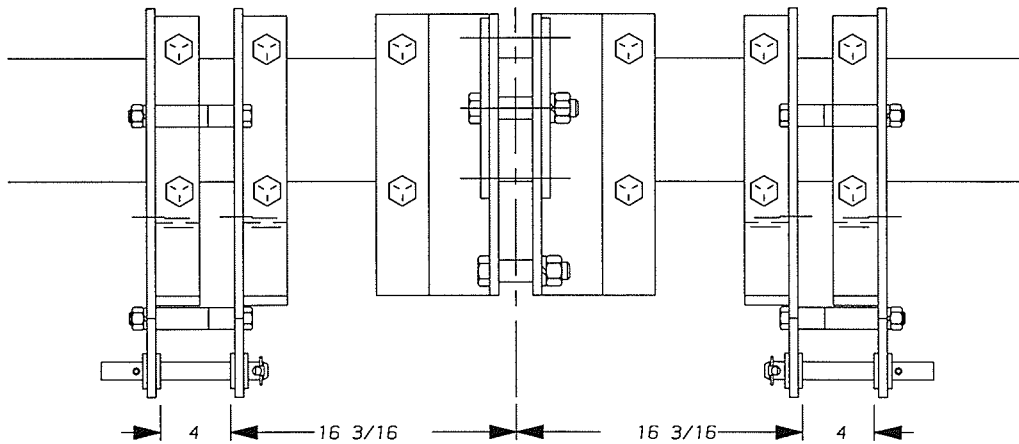
M4700-62

# CATEGORY II STANDARD AND QUICK HITCH

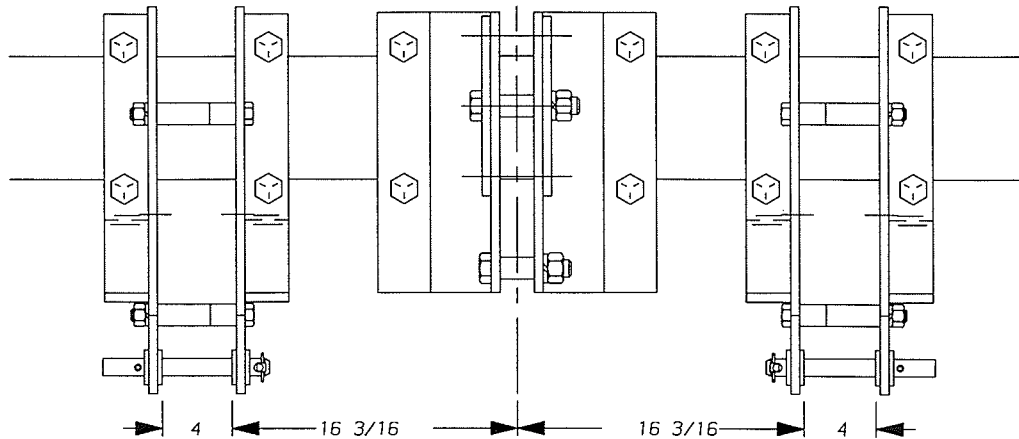
CAT. II, STD. 3 POINT 28", 30", 36", 38", & 40" SPACING



CAT. II, QUICK HITCH 28" SPACING ONLY

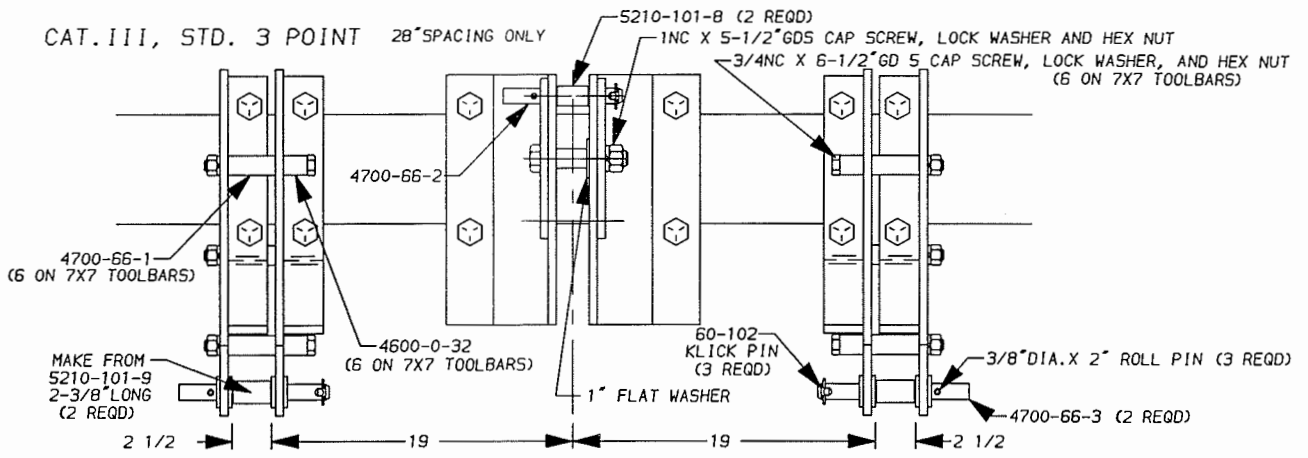


CAT. II, QUICK HITCH 30", 36", 38", & 40" SPACING

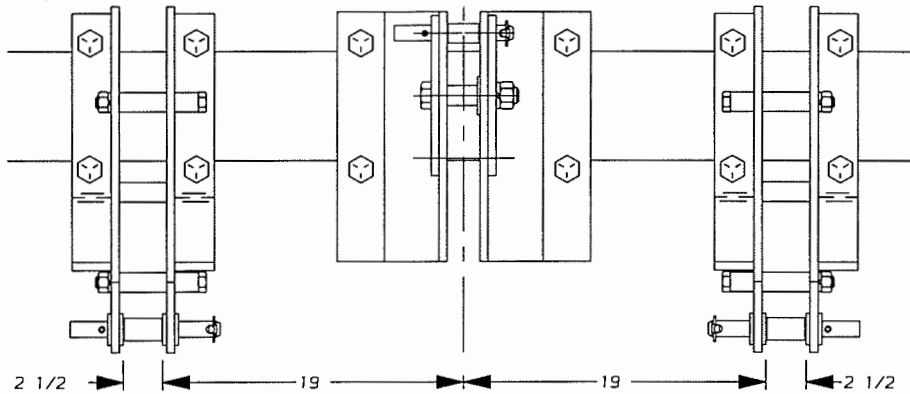


M4750-4  
REV. 5/97

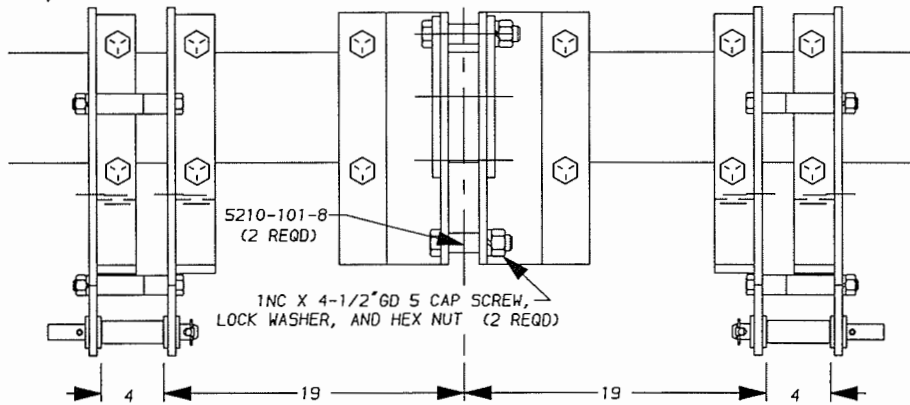
CAT. III, STD. 3 POINT 28" SPACING ONLY



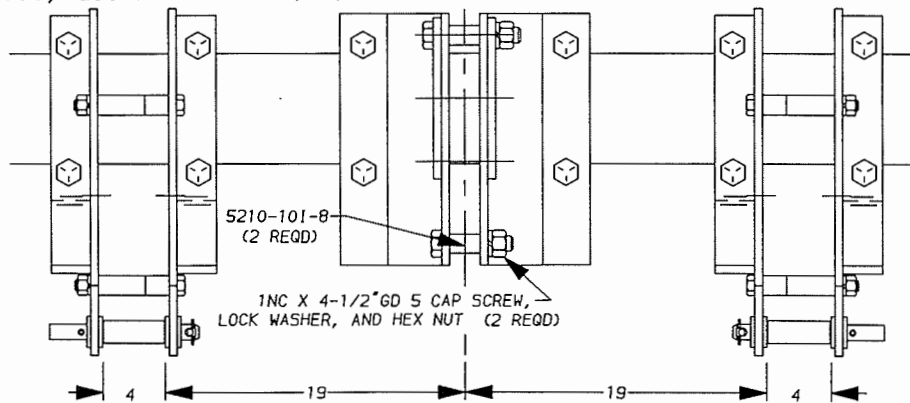
CAT. III, STD. 3 POINT 30", 36", 38", & 40" SPACING



CAT. III, QUICK HITCH 28" & 30" SPACING



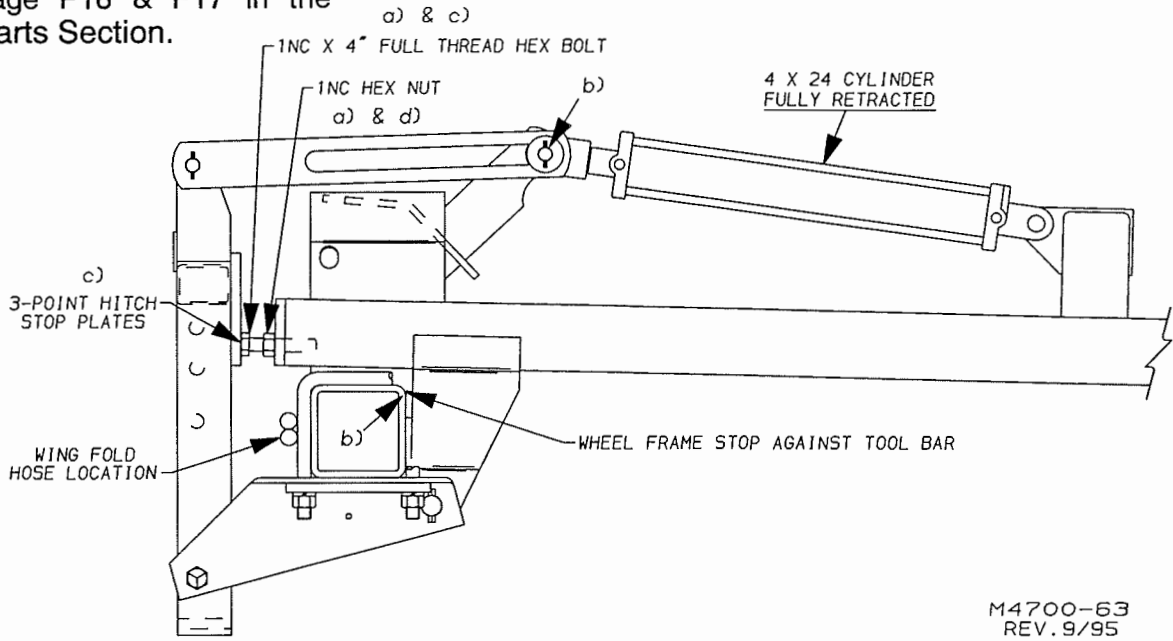
CAT. III, QUICK HITCH 36", 38", & 40" SPACING



M4700-7  
 REV. 5/97

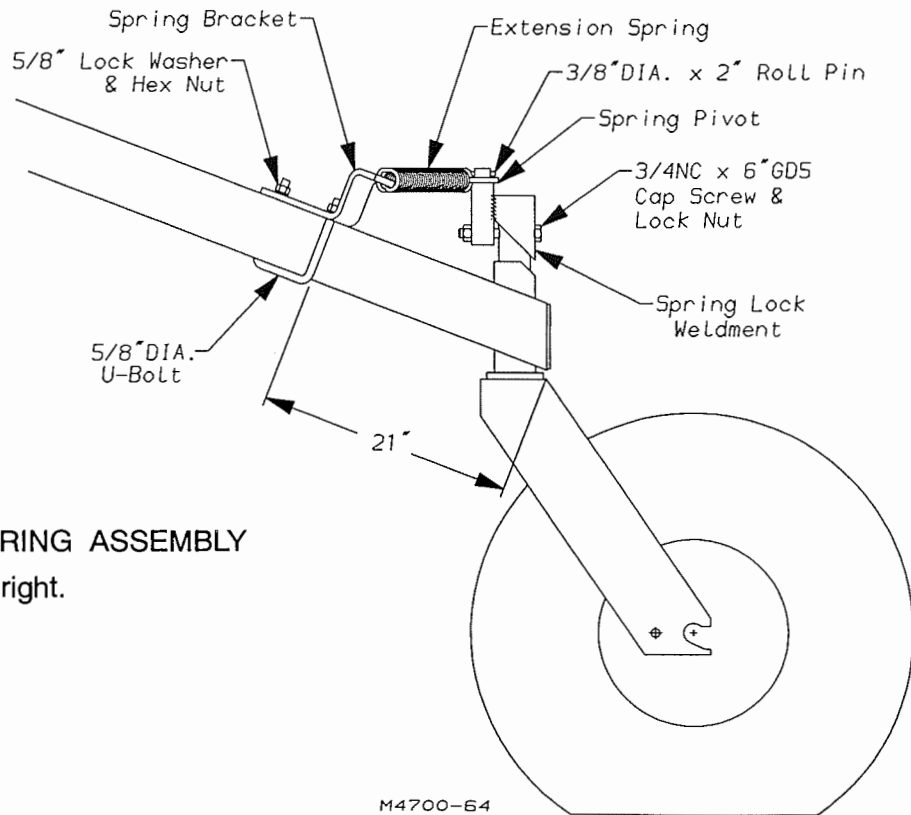
4. Rear Assist Wheel (OPTIONAL) For Models 4712-0F4 & 4716-0F3

Assemble the top 3-Point Mast and the Rear Assist Frame and Castor Wheel as shown on page P16 & P17 in the Parts Section.



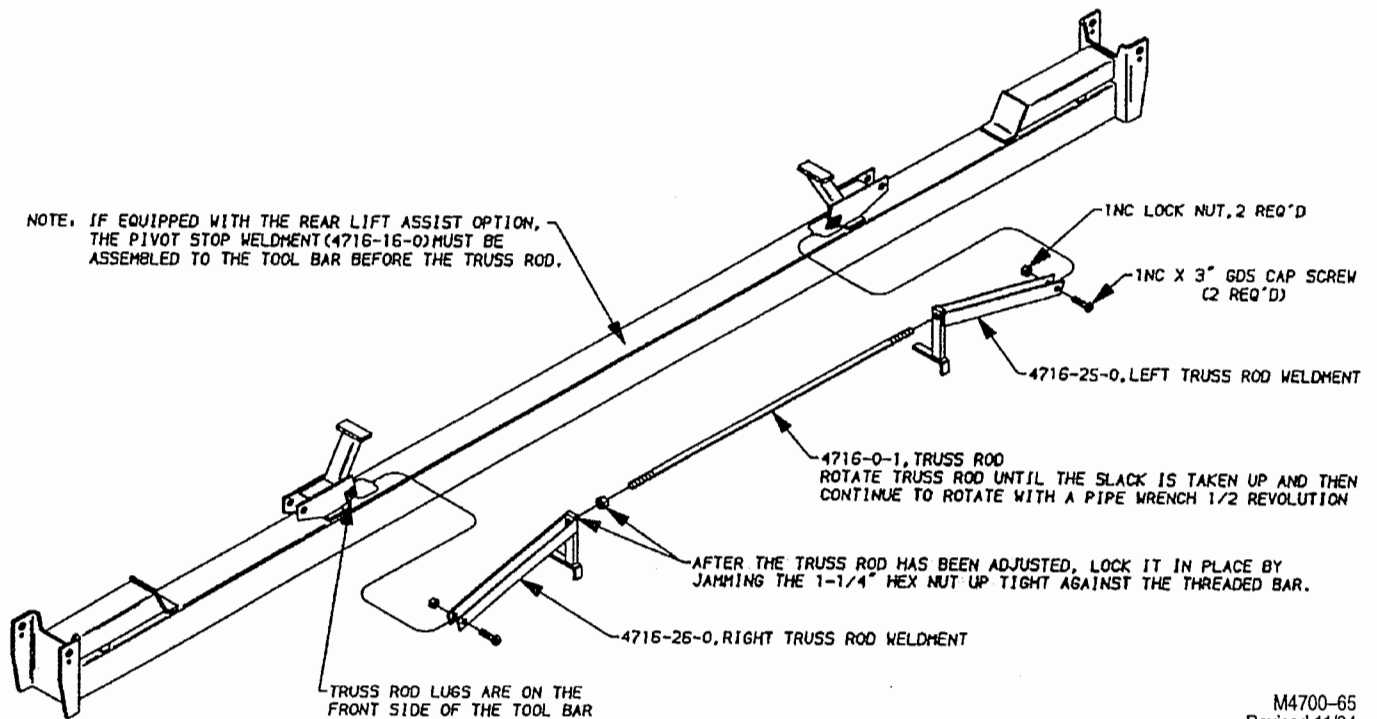
**3-Point Hitch Stop Bolt Adjustment**

- Screw the 1NC x 4" Full Thread Hex Bolts in as far as possible into the 1NC Nuts and threaded end caps on the wheel frame.
- Fully retract the 4" x 24" Hydraulic Cylinder so that the clevis pin is at the end of the slot and the wheel frame stop is tight against the tool bar.
- Unscrew both of the 1NC Full Thread Bolts until they are tight against 3-Point Hitch Stops.
- Lock the 1NC Hex Nuts against the threaded end caps.



5. CASTOR WHEEL SPRING ASSEMBLY  
See illustration to the right.

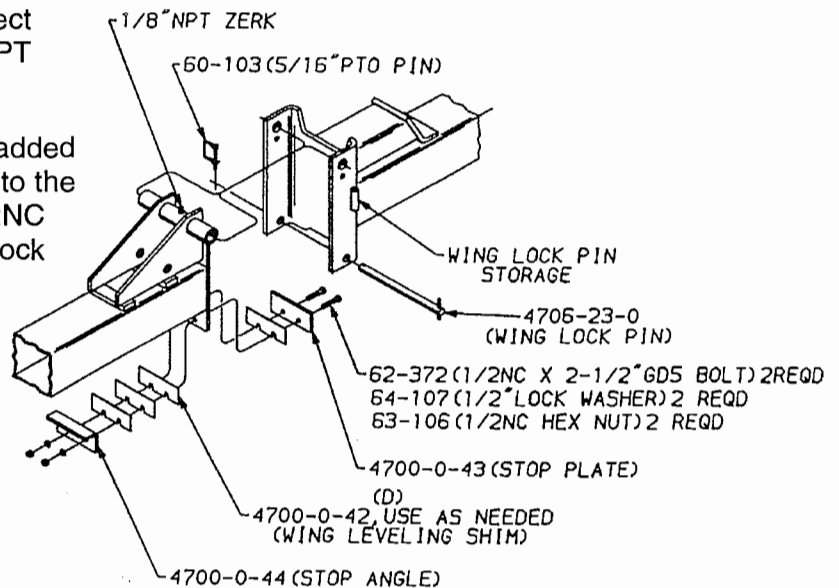
## 6. Truss Rod Assembly Models 4712-0F4 & 4716-0F3 ONLY



M4700-65  
Revised 11/94

## II. HINGE ASSEMBLY (WING MODELS ONLY)

1. Check hinge pin for correct assembly and screw in 1/8NPT Zerk.
2. 4700-0-12 SHIMS can be added if needed to level the wings to the center tool bar. Use TWO 1/2NC x 1-1/2" Cap Screws, Lock Washers and Hex Nuts to attach the shims at each wing hinge.
3. Assemble (4706-23-0) WING LOCK PIN ASSEMBLY in the storage location.



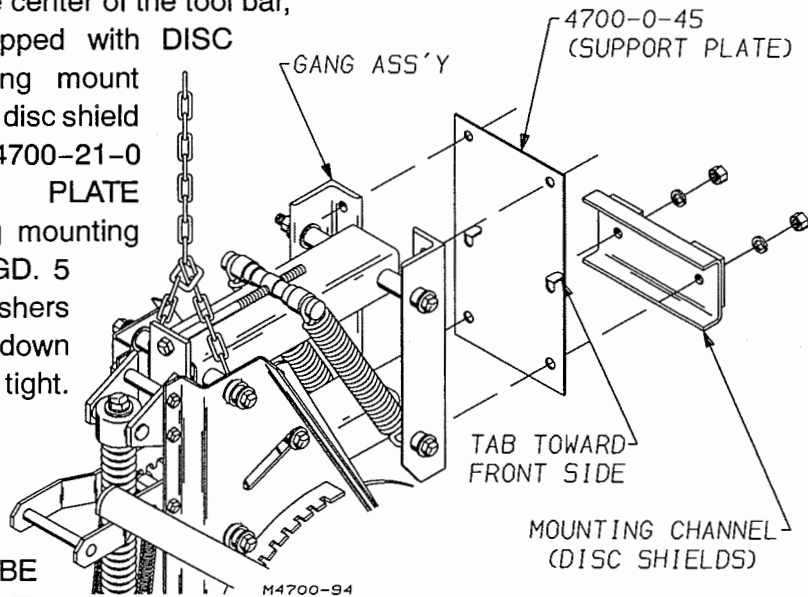
M4700-66

### III. GANG AND SWEEP ASSEMBLY

1. Assemble the first gang at the center of the tool bar,

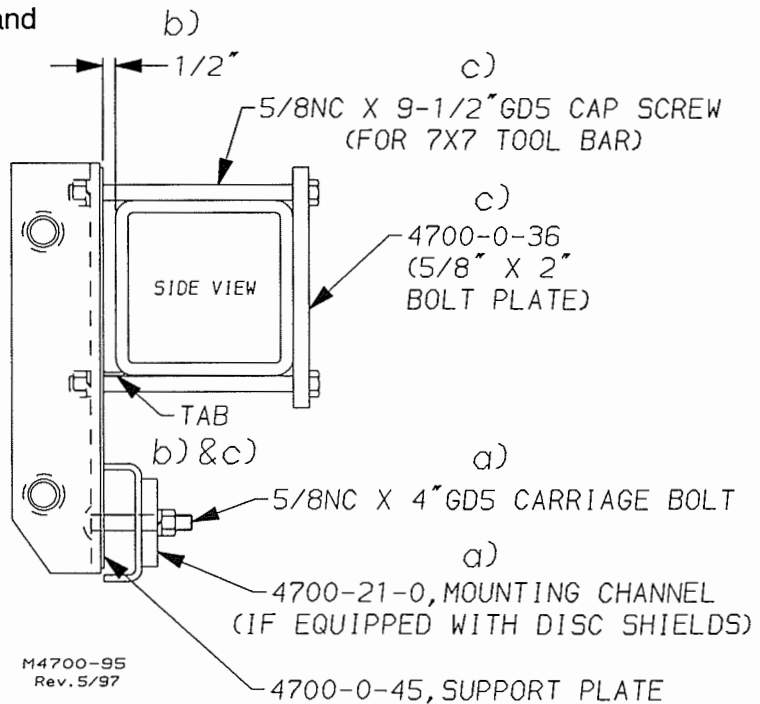
a. If the cultivator is equipped with DISC SHIELDS, start the gang mount assembly by attaching the disc shield MOUNTING CHANNEL (4700-21-0) and the SUPPORT PLATE (4700-0-45) to the gang mounting angles with 5/8NC x 4" GD. 5 Carriage Bolts, Lock Washers and Hex Nuts. Screw nuts down until they are snug but not tight.

b. Slide the gang up to approximately 1/2" from the TOOL BAR.



NOTE: TAB SHOULD NOT BE UNDER TOOL BAR YET.

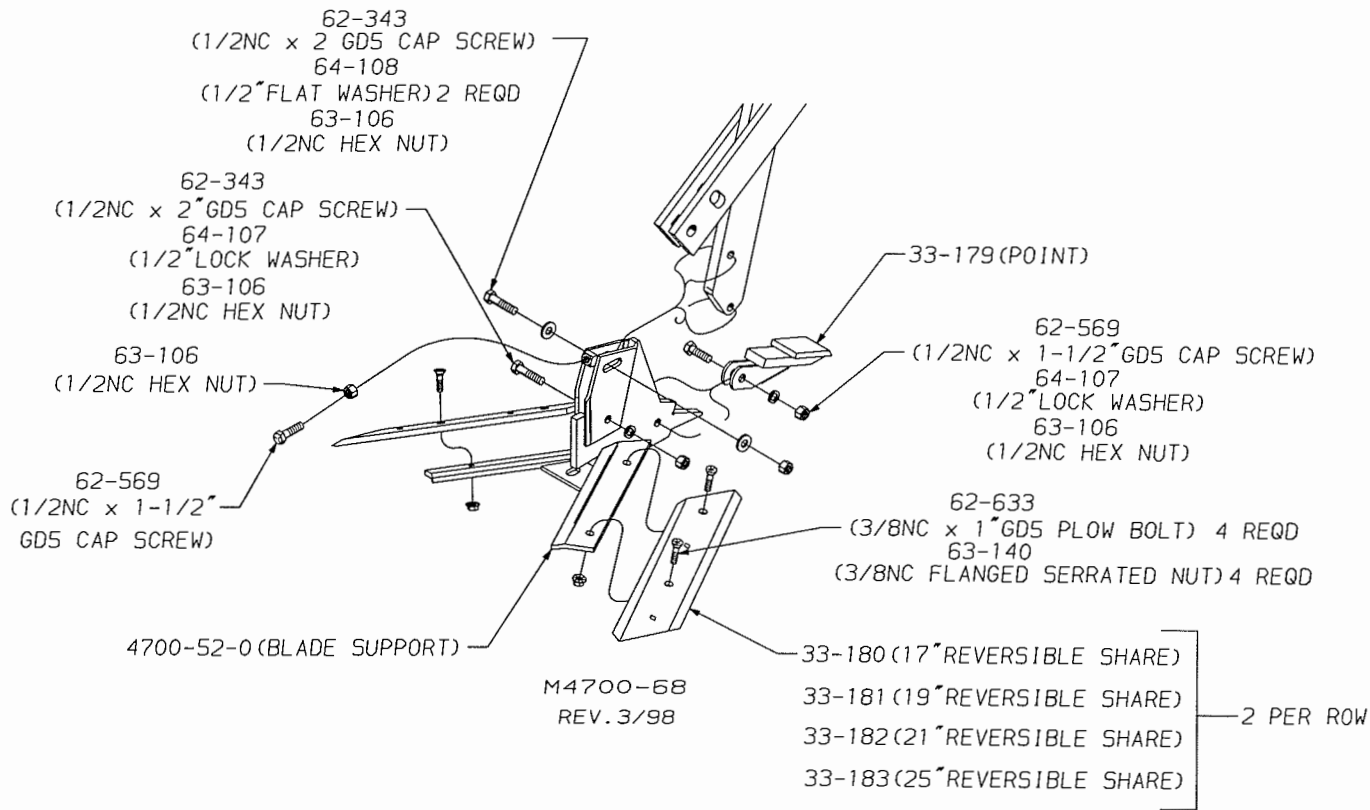
c. Assemble the 5/8NC Bolts and BOLT PLATES (4700-0-36) to the gangs. As the bolts are tightened, the tab will be forced between the tool bar and the lower bolt. This will square up and tighten the gang mounting.



2. Determine the row spacing and make a mark at each gang location measuring left and right from the center gang.

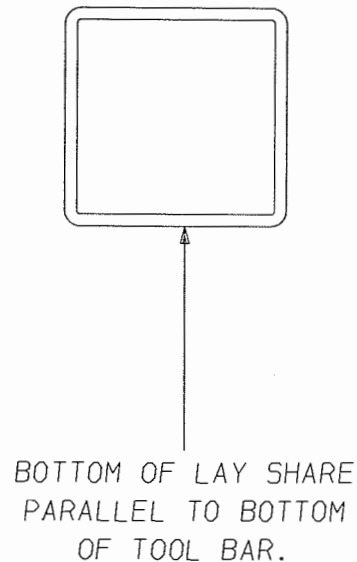
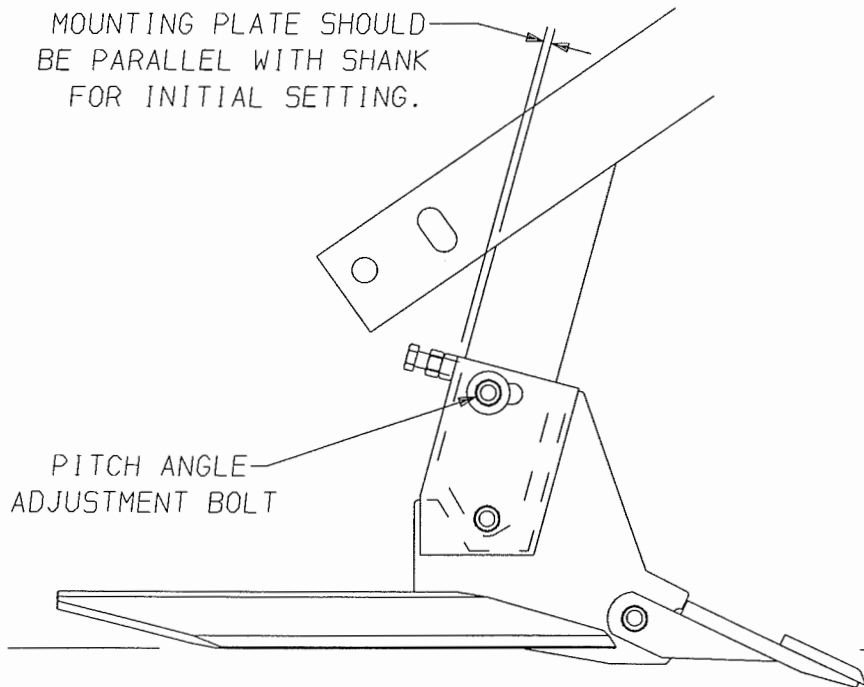
3. Attach the remaining gangs to the tool bar at the marked locations.

**⚠ Danger:** Due to their sharpness and weight, serious injury can be inflicted by coultter blades and gangs if not handled safely. Watch for unsafe conditions. Keep your co-workers safety in mind. Should personal injury occur, have medical treatment administered immediately.



## POINT & LAY SHARE

MOUNTING PLATE SHOULD BE PARALLEL WITH SHANK FOR INITIAL SETTING.

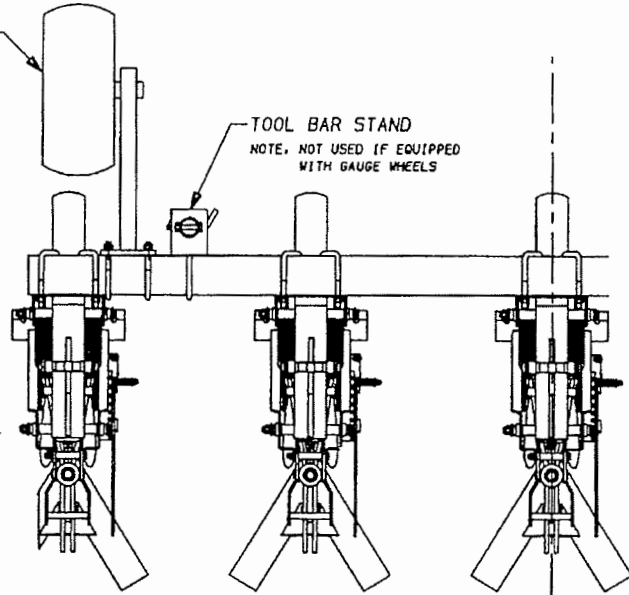


M4700-14  
REV. 2/94

OPT.- TOOL BAR GAUGE WHEEL

TOOL BAR STAND  
NOTE, NOT USED IF EQUIPPED  
WITH GAUGE WHEELS

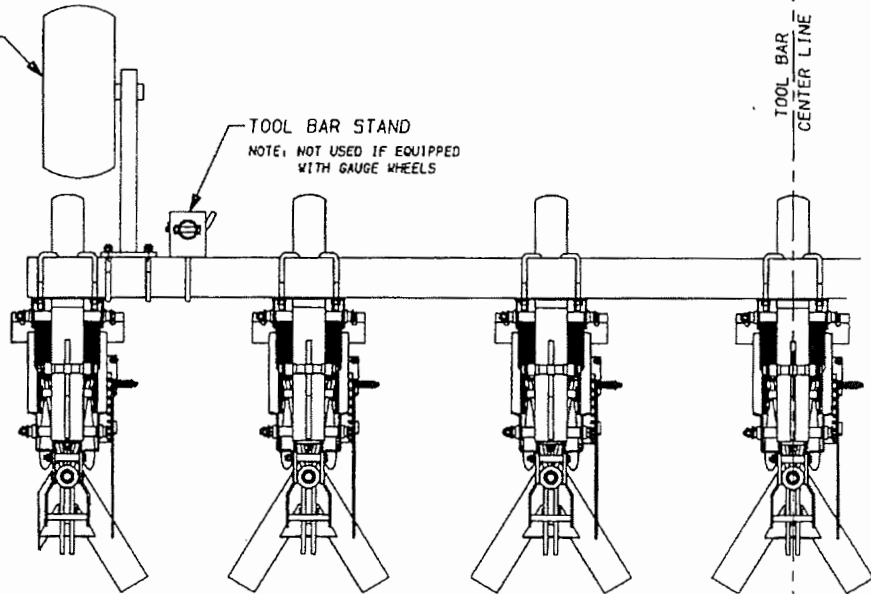
RIGID 4 ROW



OPT.- TOOL BAR GAUGE WHEEL

TOOL BAR STAND  
NOTE, NOT USED IF EQUIPPED  
WITH GAUGE WHEELS

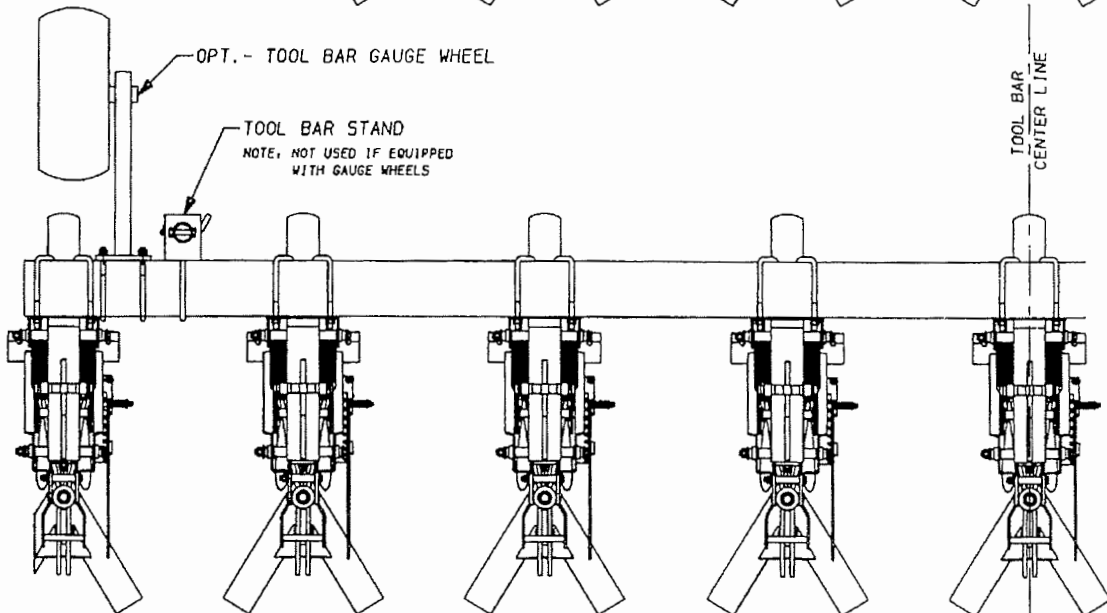
RIGID 6 ROW



OPT.- TOOL BAR GAUGE WHEEL

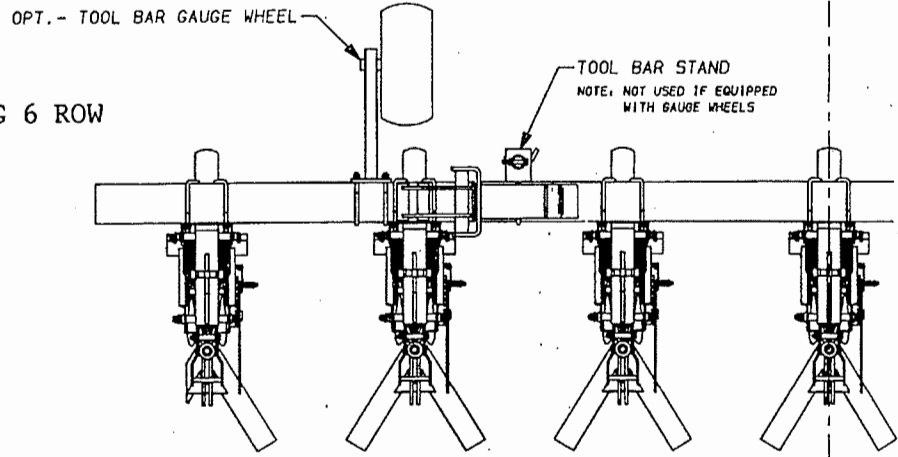
TOOL BAR STAND  
NOTE, NOT USED IF EQUIPPED  
WITH GAUGE WHEELS

RIGID 8 ROW

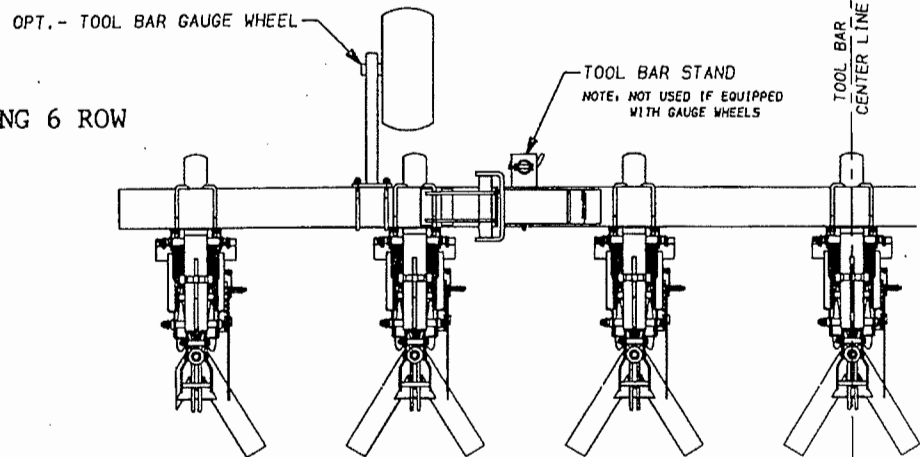


M4700-69

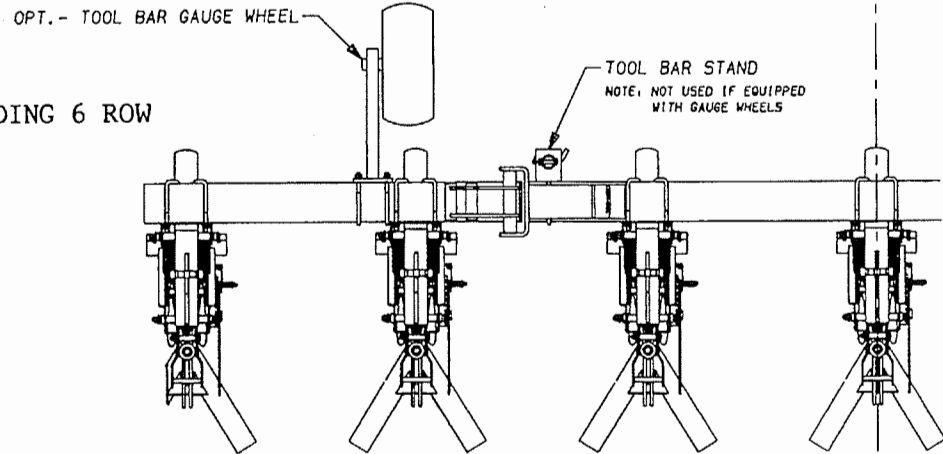
36" SPACING, FOLDING 6 ROW



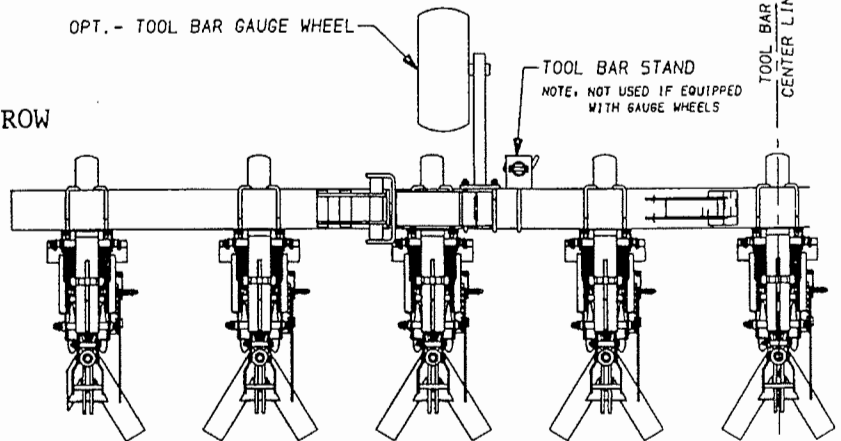
38" SPACING, FOLDING 6 ROW



40" SPACING, FOLDING 6 ROW

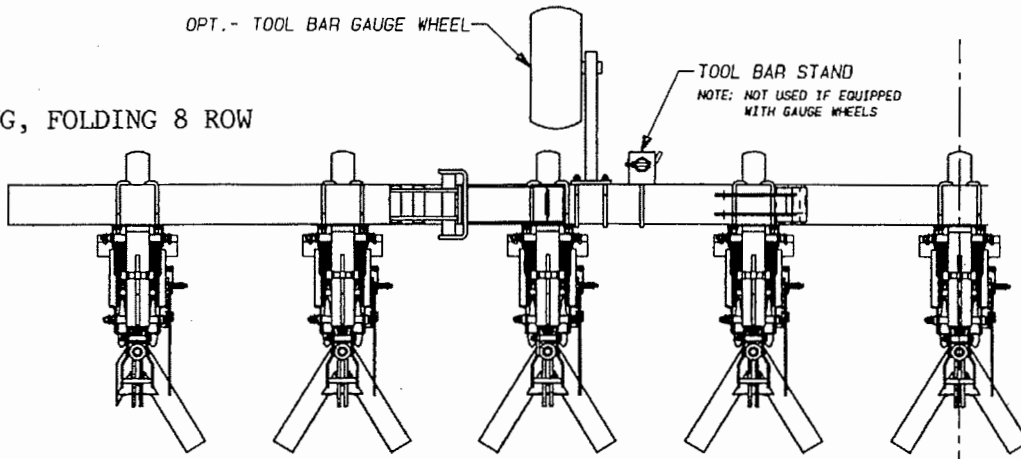


30" SPACING, FOLDING 8 ROW

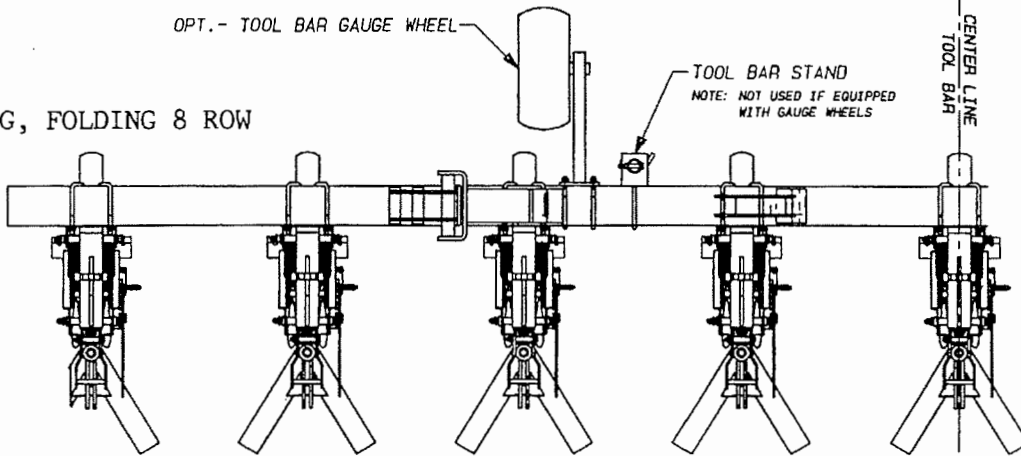


M4700-70

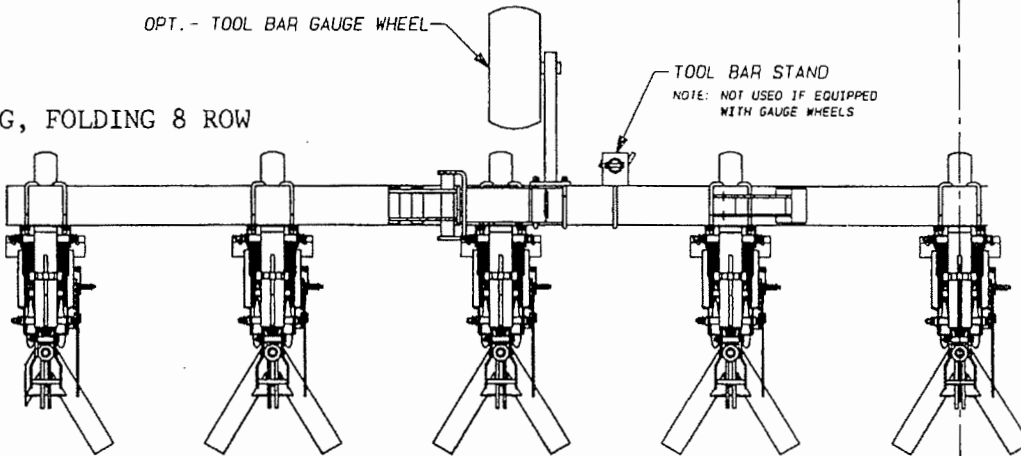
36" SPACING, FOLDING 8 ROW



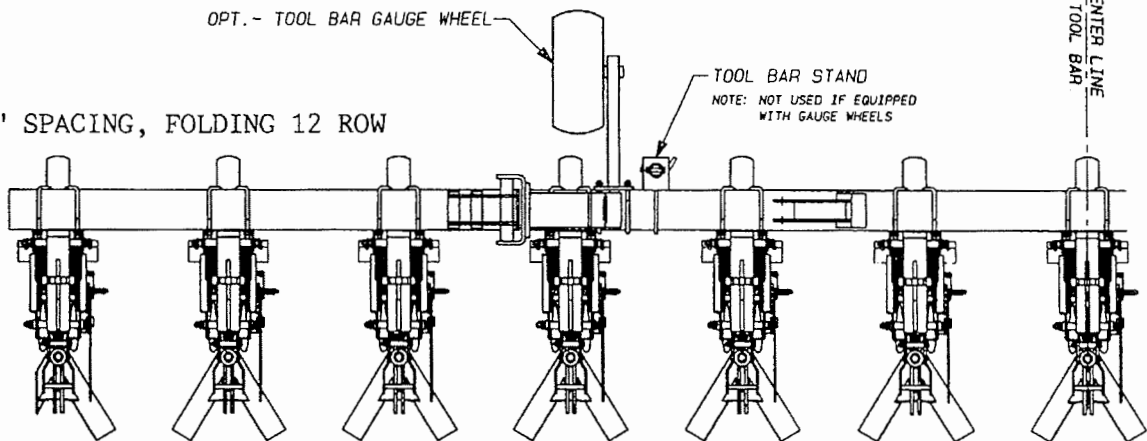
38" SPACING, FOLDING 8 ROW



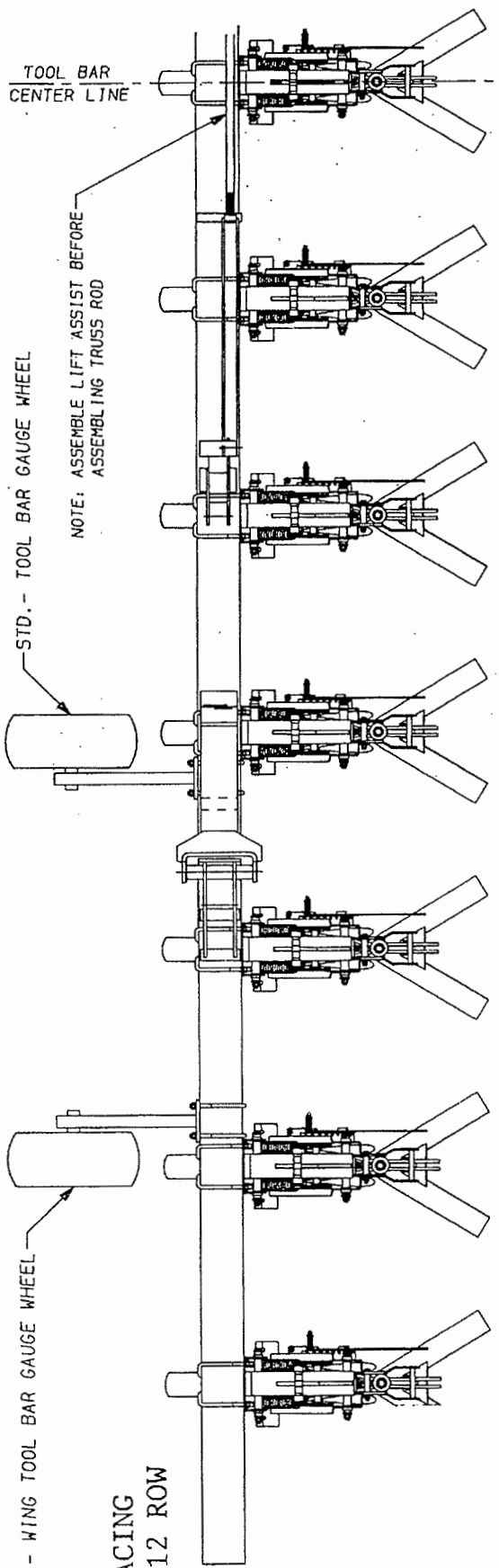
40" SPACING, FOLDING 8 ROW



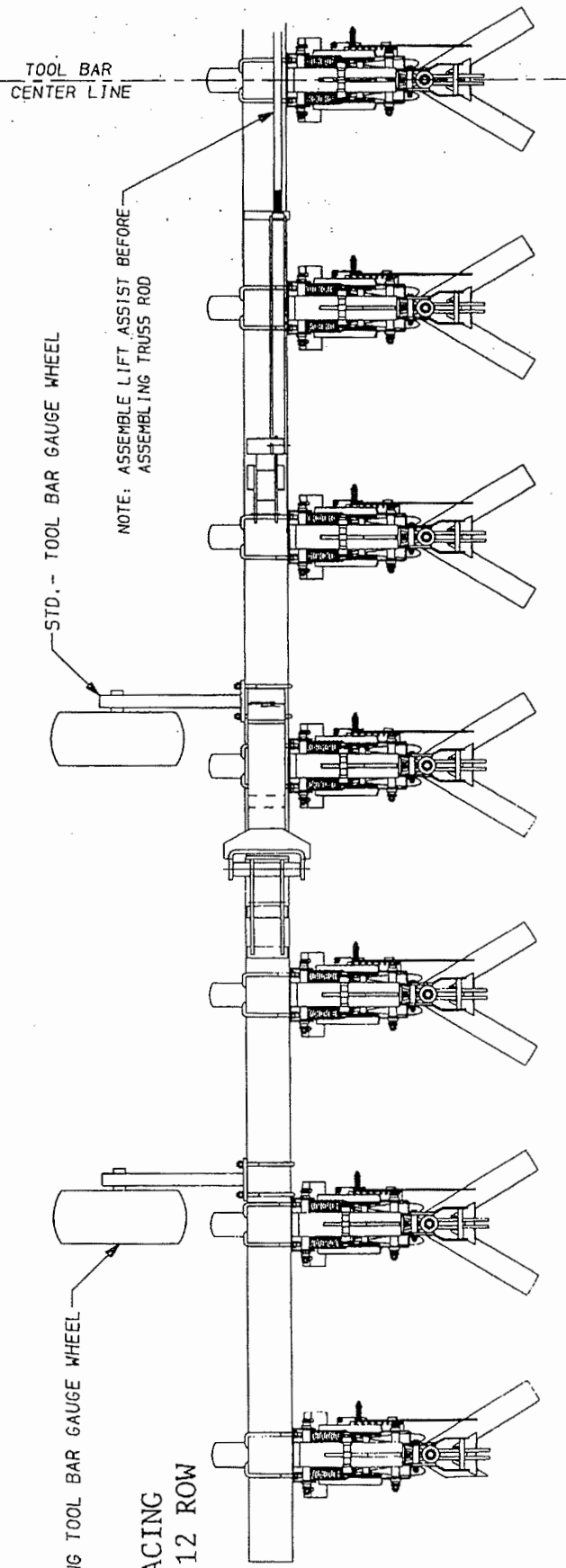
30" SPACING, FOLDING 12 ROW



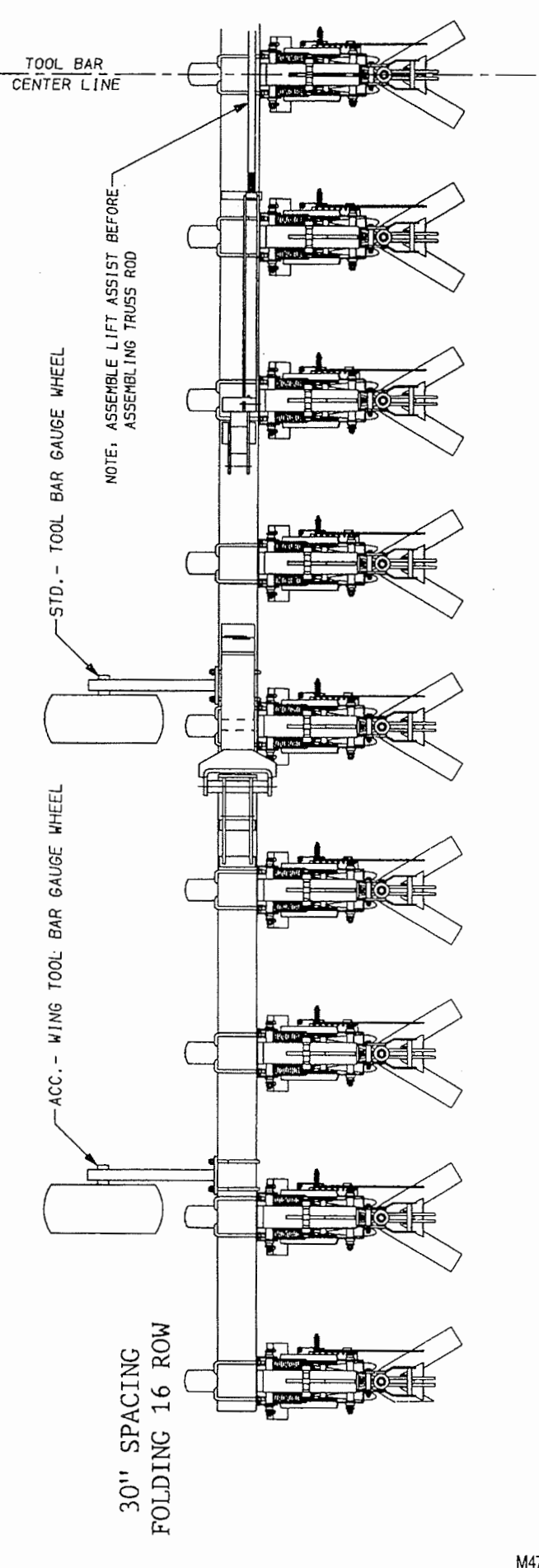
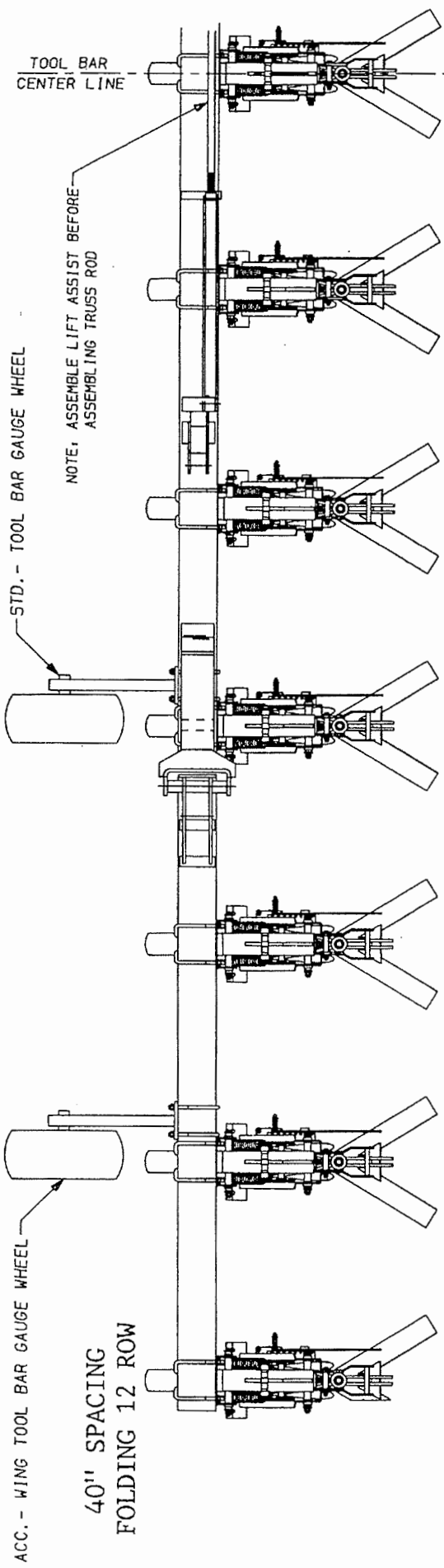
M4700-71



ACC. - WING TOOL BAR GAUGE WHEEL  
 36" SPACING  
 FOLDING 12 ROW

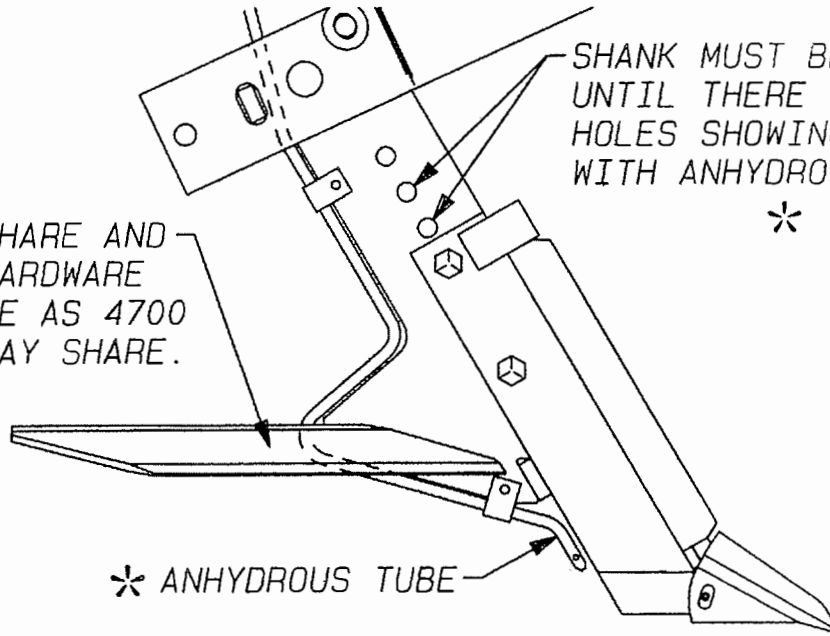


ACC. - WING TOOL BAR GAUGE WHEEL  
 38" SPACING  
 FOLDING 12 ROW



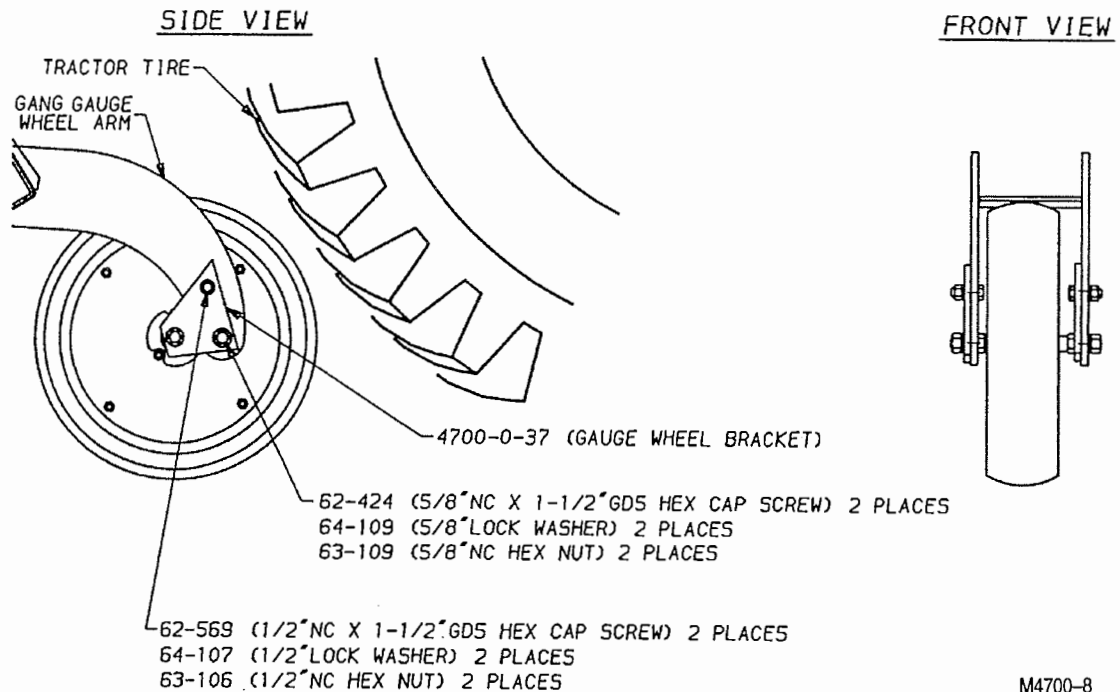
## IV. 4750 SERIES SUBSOIL CULTIVATOR

NOTE: LAY SHARE AND ATTACHING HARDWARE ARE THE SAME AS 4700 POINT AND LAY SHARE.



M4700-96  
2/94

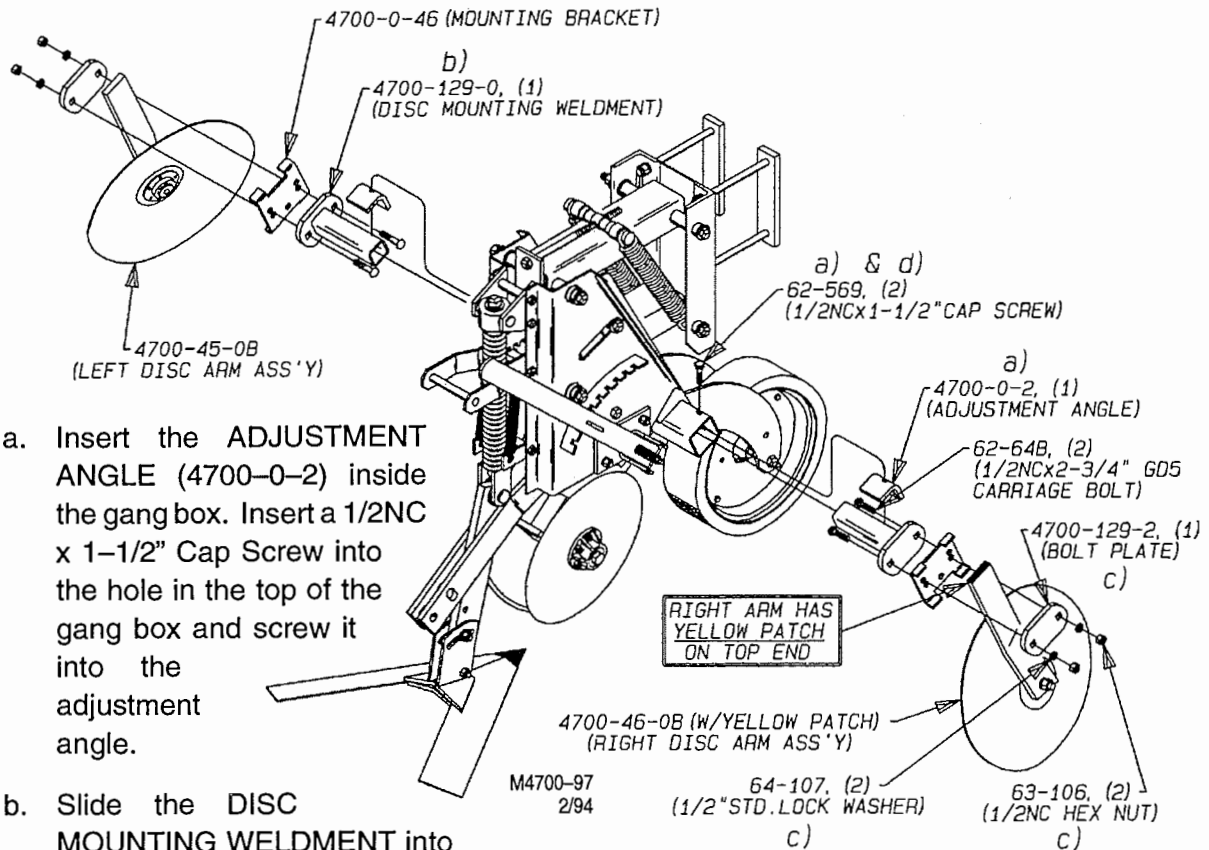
## V. GAUGE WHEEL BRACKET



**SPECIAL NOTE:** Gauge wheel and tractor interference is possible in the raised position on some standard 3-Point hitch tractors. This should be checked the first time the cultivator is hitched to the tractor. If this occurs, the gauge wheel can be moved back using (4700-0-37) brackets as shown. Enough parts for 2 gangs comes with each cultivator. A wheel bracket sack (4700-88-0) can also be ordered if 2 more gangs need to be changed.

# VI. CUT-AWAY DISC BLADE -- ACCESSORY

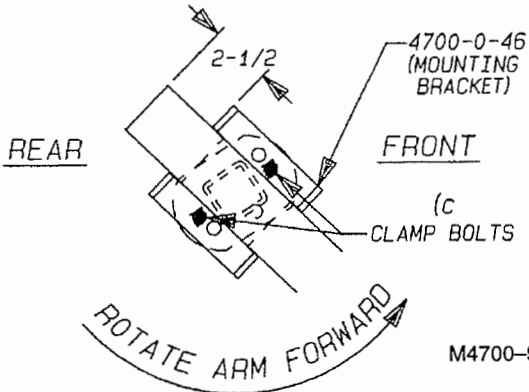
## 1. NARROW ROW SPACING MODELS (28" & 30" ONLY)



a. Insert the ADJUSTMENT ANGLE (4700-0-2) inside the gang box. Insert a 1/2NC x 1-1/2" Cap Screw into the hole in the top of the gang box and screw it into the adjustment angle.

b. Slide the DISC MOUNTING WELDMENT into the gang tube and under the adjustment angle. Retain it temporarily by tightening the adjustment bolt.

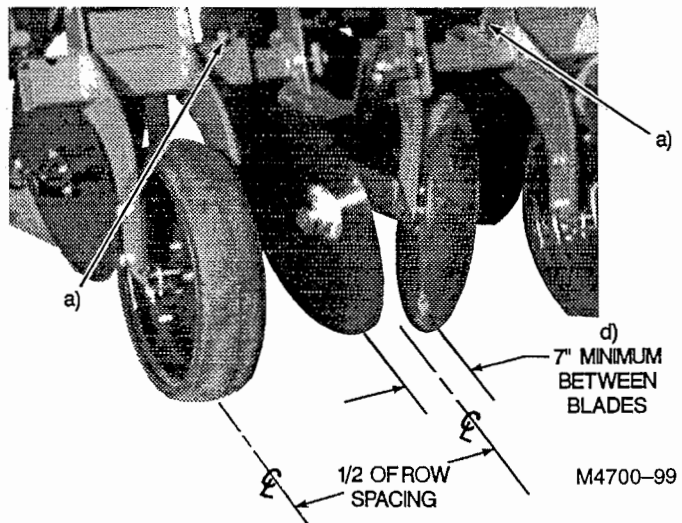
28" & 30" ROW MODELS ONLY



c. Refer to the MOUNTING BRACKET illustration on this page. With the MOUNTING BRACKET rotated toward the front, attach the MOUNTING BRACKET (4700-0-46), the RIGHT DISC ARM ASSEMBLY (4700-0-46B), and the BOLT PLATE (4700-129-2) with (2) 1/2NC x 2-3/4" GD. 5 Carriage Bolts, Lock Washers and Hex Nuts. Tighten the bolts with the top end of the disc arm 2-1/2" above the mounting bracket.

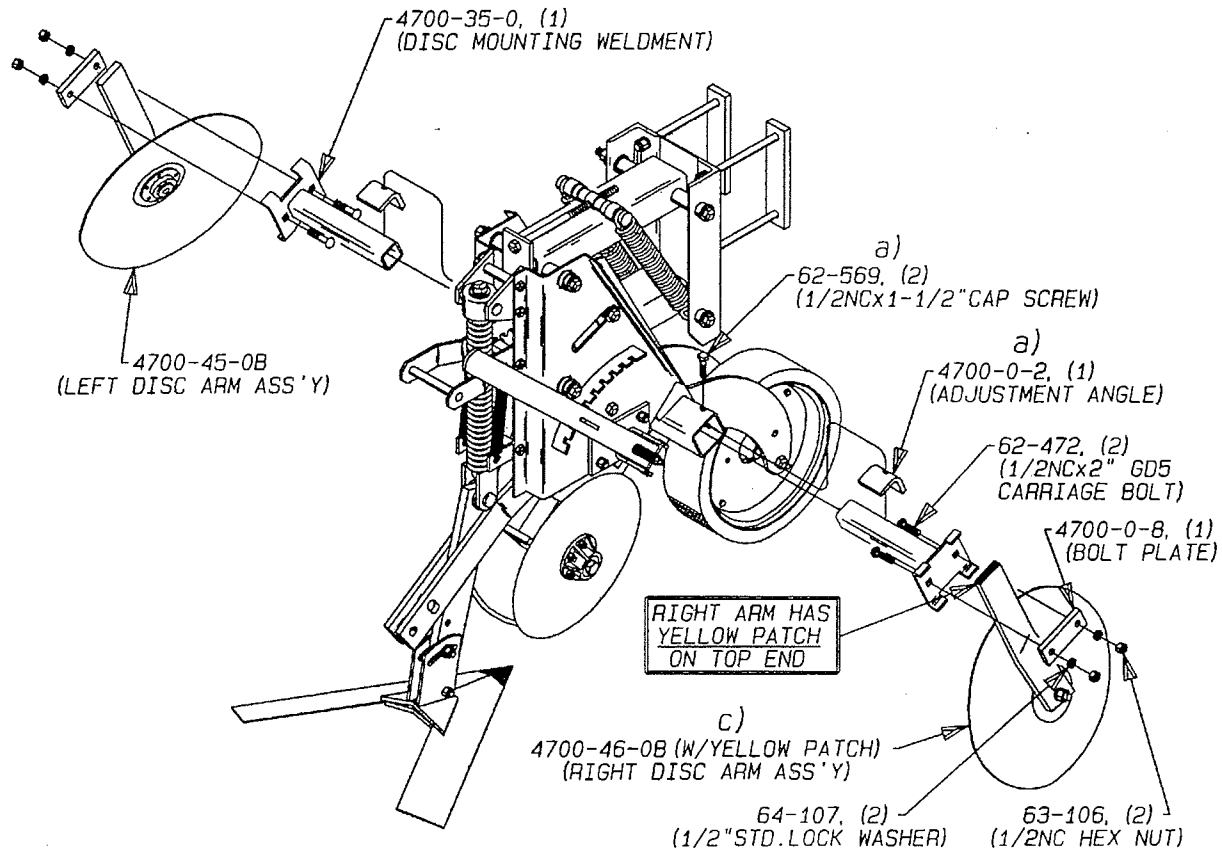
d. Loosen the ADJUSTMENT ANGLE BOLT "A" (see photograph to the right) and slide the discs in or out until there is a little more than 7" between the cut-away blades.

**TIGHTEN ADJUSTMENT BOLT "A".**



## VII. CUT-AWAY DISC BLADE — ACCESSORY

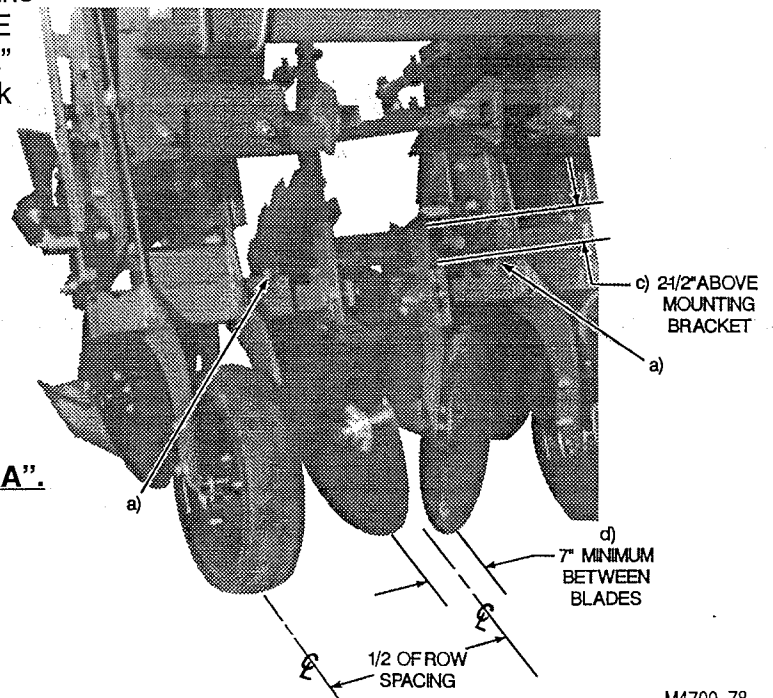
### 1. WIDE ROW SPACING MODELS (36", 38" & 40" ONLY)



M4700-77  
Revised 2/94

- Insert the ADJUSTMENT ANGLE (4700-0-2) inside the gang box. Insert a 1/2NC x 1-1/2" Cap Screw into the hole in the top of the gang box and screw it into the adjustment angle.
- Slide the DISC MOUNTING WELDMENT into the gang tube and under the adjustment angle. Retain it temporarily by tightening the adjustment bolt.
- Fasten the RIGHT DISC ARM ASSEMBLY (4700-46-0 Yellow Patch) to the mounting weldment on the right side of the gang with a BOLT PLATE (4700-0-8), (2) 1/2NC x 2" GRADE 5 Carriage Bolts, Lock Washers, and Hex Nuts. Adjust the top end to 2-1/2" above the mounting channel.
- Loosen the ADJUSTMENT ANGLE BOLT "a" (see photograph to right) and slide the discs in or out until there is a little more than 7" between the cut-away blades.

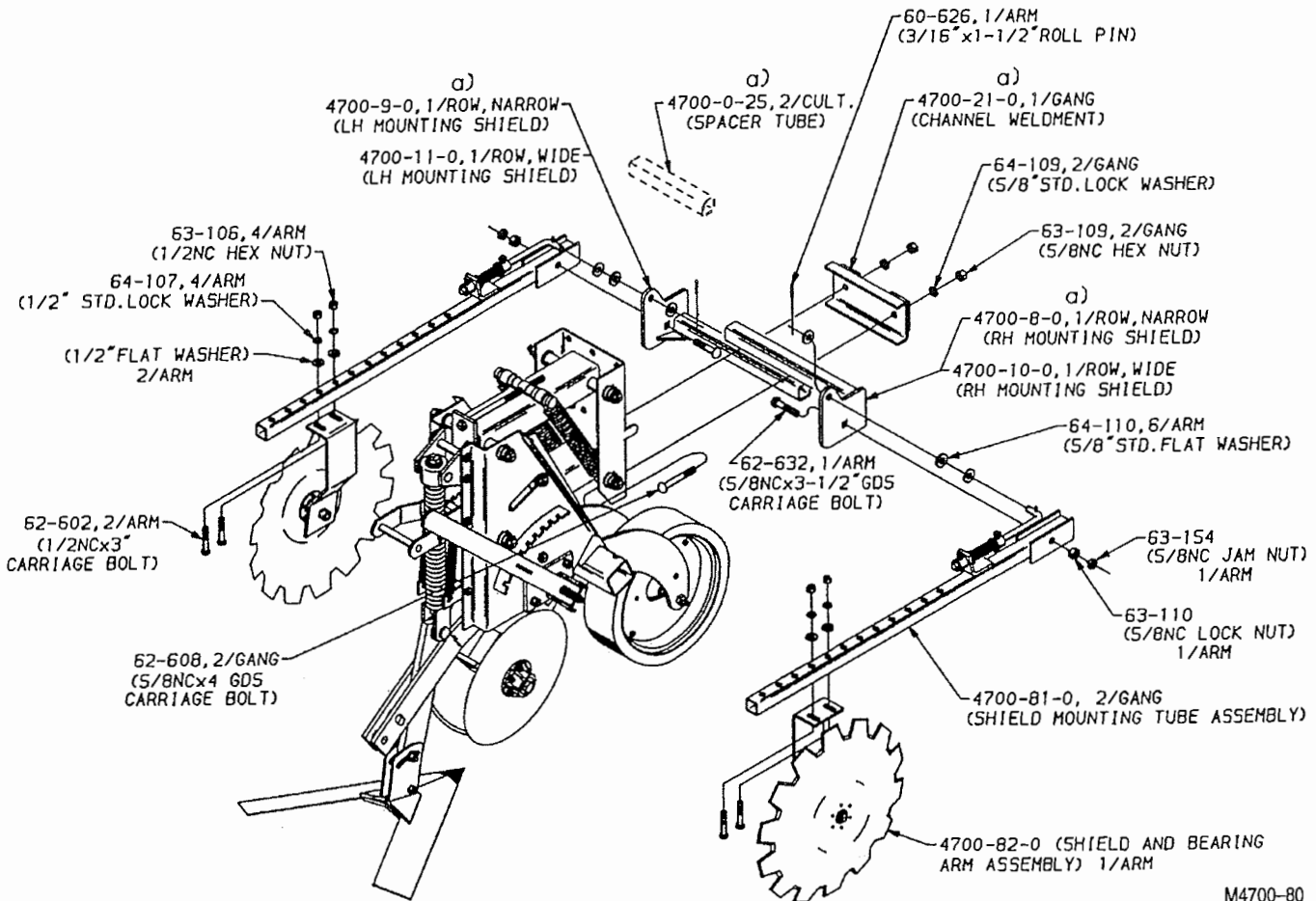
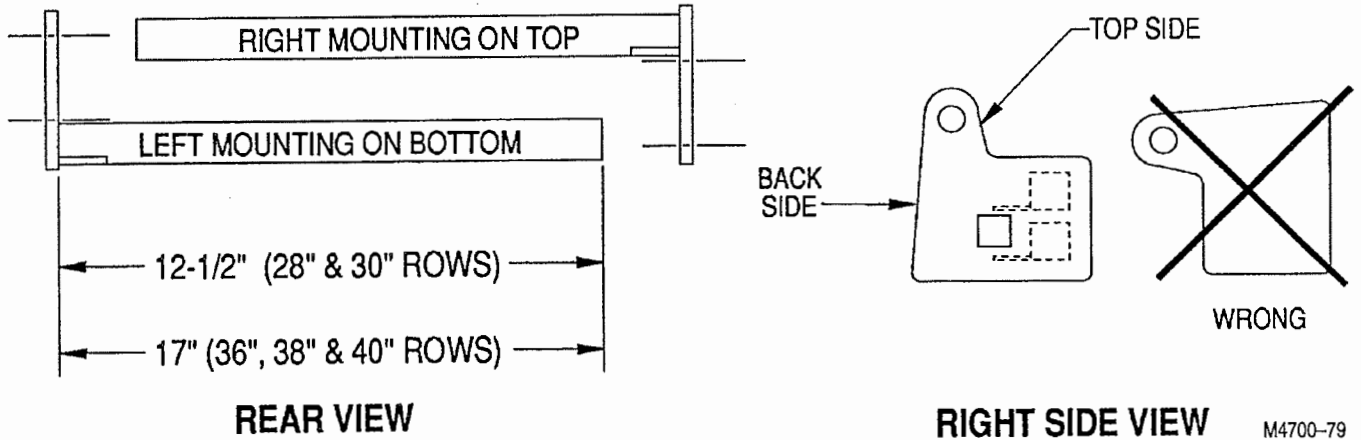
#### TIGHTEN ADJUSTMENT BOLT "A".



## VIII. DISC SHIELD — ACCESSORY

- a) Loosely assemble all of the left and right mounting weldments to the gang mounting channels.

**NOTE:** Narrow Row Models have a 12-1/2" Left & Right Mounting Tube Length  
Wide Row Models have a 17" Left and Right Mounting Tube Length.

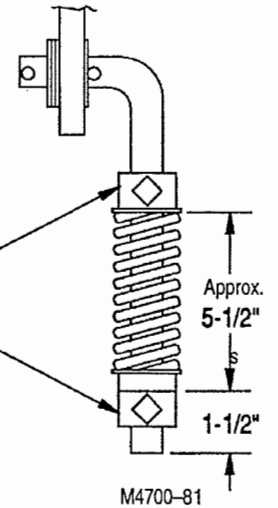


M4700-80  
 Revised 9/95

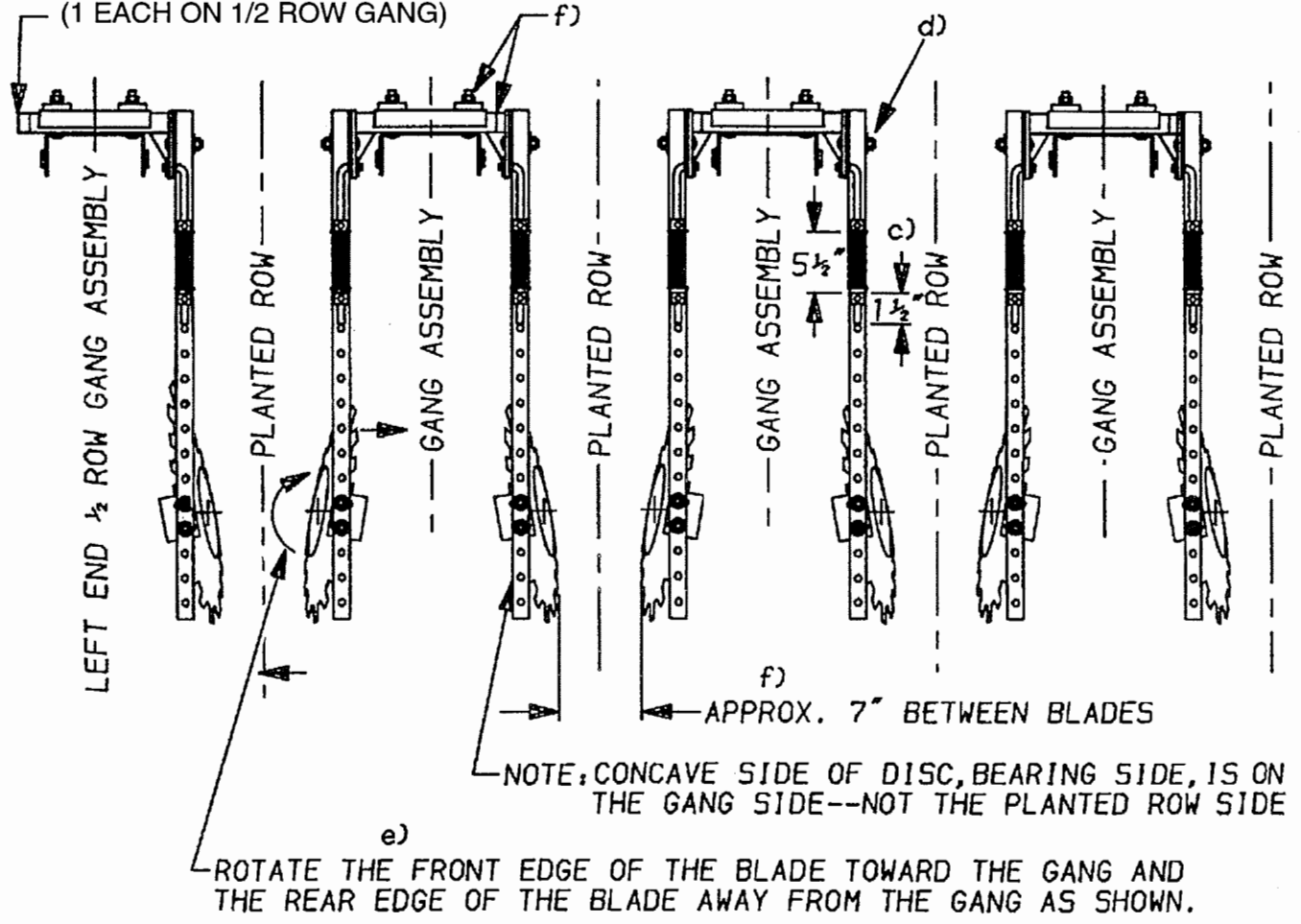
- b) Loosely assemble the remaining disc shield component parts as shown.

- c) Set the LOCK SLEEVES (4700-0-22) at 1-1/2" & 5-1/2" as illustrated to the right.
- d) Loosen the 5/8NC Lock Nut where the arm pivots until the arm will rotate freely yet has no "side to side" movement and then lock it in place with a 5/8NC Jam Nut.
- e) Rotate the front of the discs toward the gang and the rear edge of the disc blade away from the gang and then tighten the bearing arm bolts.
- f) Slide the mounting tubes in or out until there is approximately 7" between the disc shields and then tighten the channel bolts.

LOCK COLLAR POSITIONS



★4700-0-25, SPACER TUBE (PART OF 4700-28-0 CHANNEL & BOX ASSEMBLY)  
(1 EACH ON 1/2 ROW GANG)



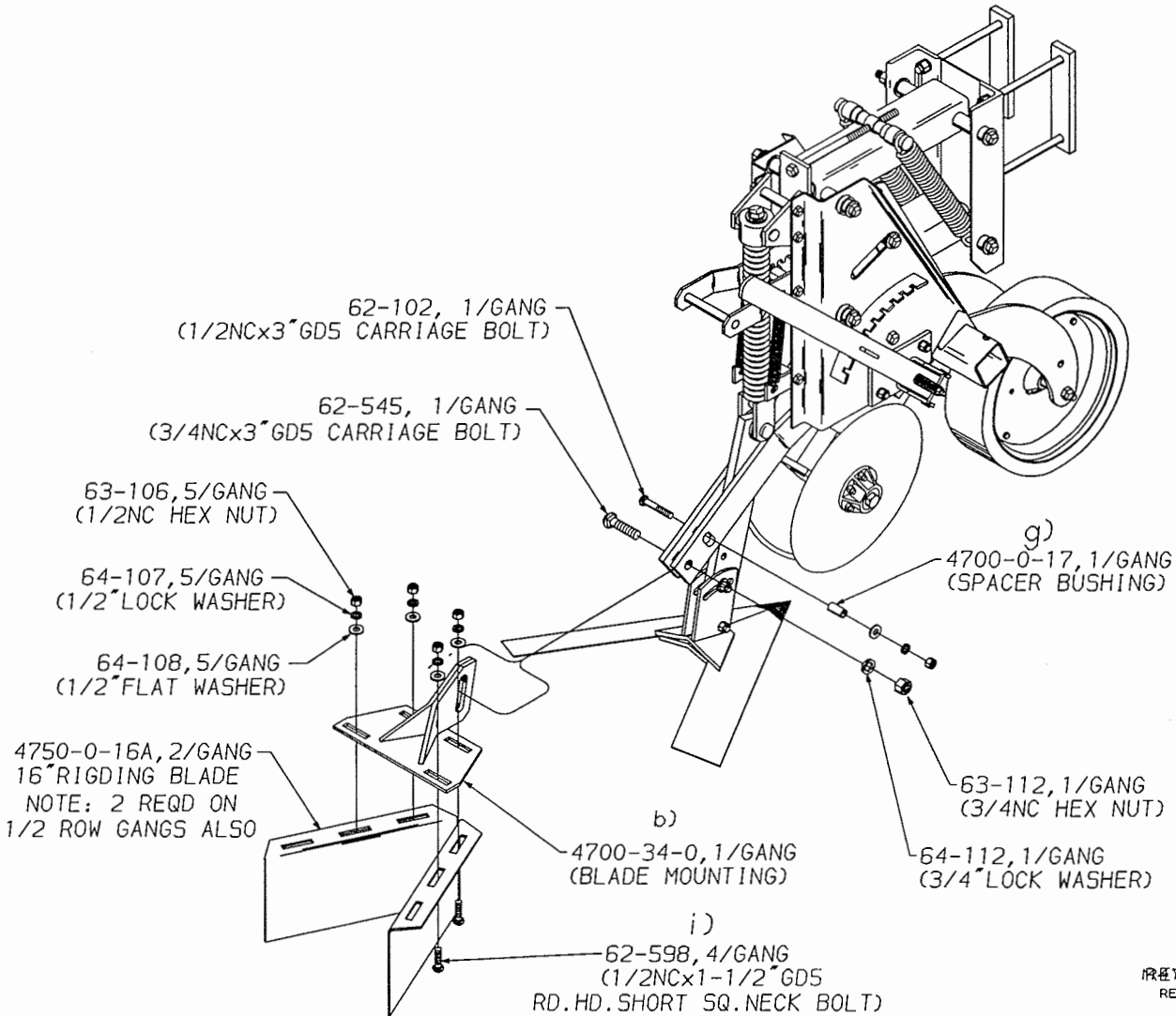
**TOP VIEW**

M4700-82  
Revised 9/95

- \* Disc Shields can be ordered (2) different ways.
  - (1) They can be ordered by the gang which would have a shield on both sides of the half row gangs.
  - (2) They can also be ordered by the row plus a 4700-28-0 Channel and Box Assembly which would not have a disc shield on the outside of the half row gangs.

# IX. RIDGING BLADE -- ACCESSORY

WIDE ROW SPACING (36", 38", 40")

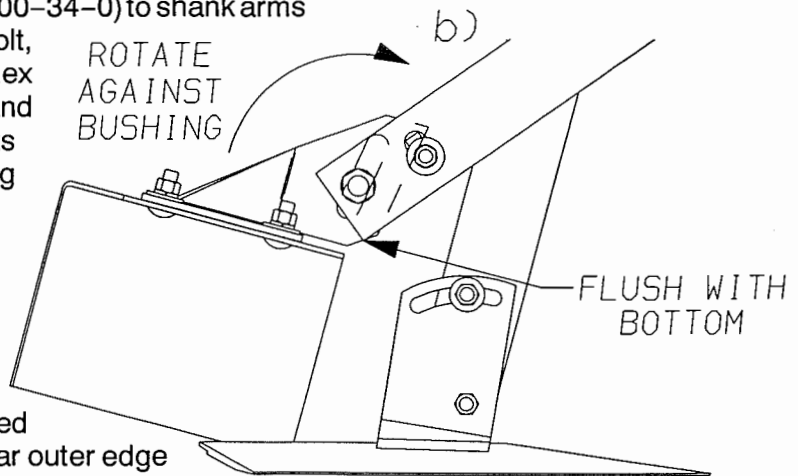


REV 05/97  
REV. 5/97

g) Assemble a SPACER BUSHING (4700-0-17) at the bottom end of the shank arm slots with a 1/2NC x 3" Carriage Bolt, FLat Washer, Lock Washer and Hex Nut.

h) Fasten BLADE MOUNTING (4700-34-0) to shank arms with a 3/4NC x 3" Carriage Bolt, Flat Washer, Lock Washer and Hex Nut. Rotate mounting up and forward until front edge contacts spacer bushing. Slide mounting up until bottom edge is flush.

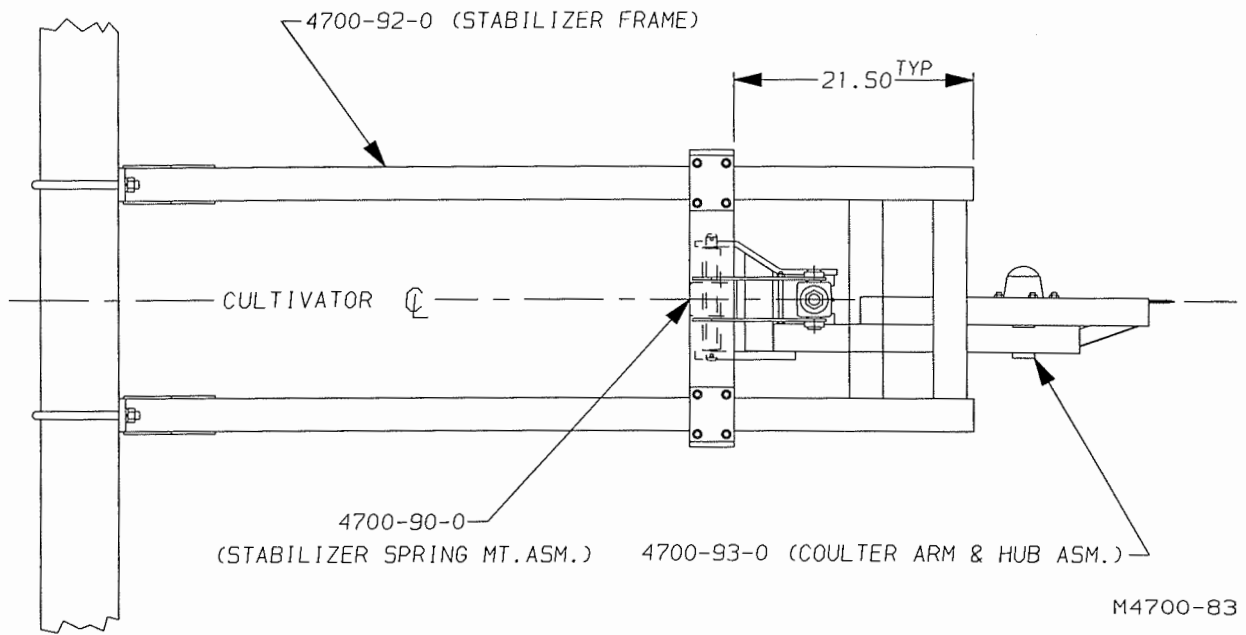
i) Attach the Ridging Blades to the mounting with 1/2NC x 1-1/2" Carriage Bolts Flat Washers, Lock Washers, and Hex Nuts. The front edges should be together and centered behind the shank. Adjust the rear outer edge flush with the back corner of the mounting plate.



M4700-76

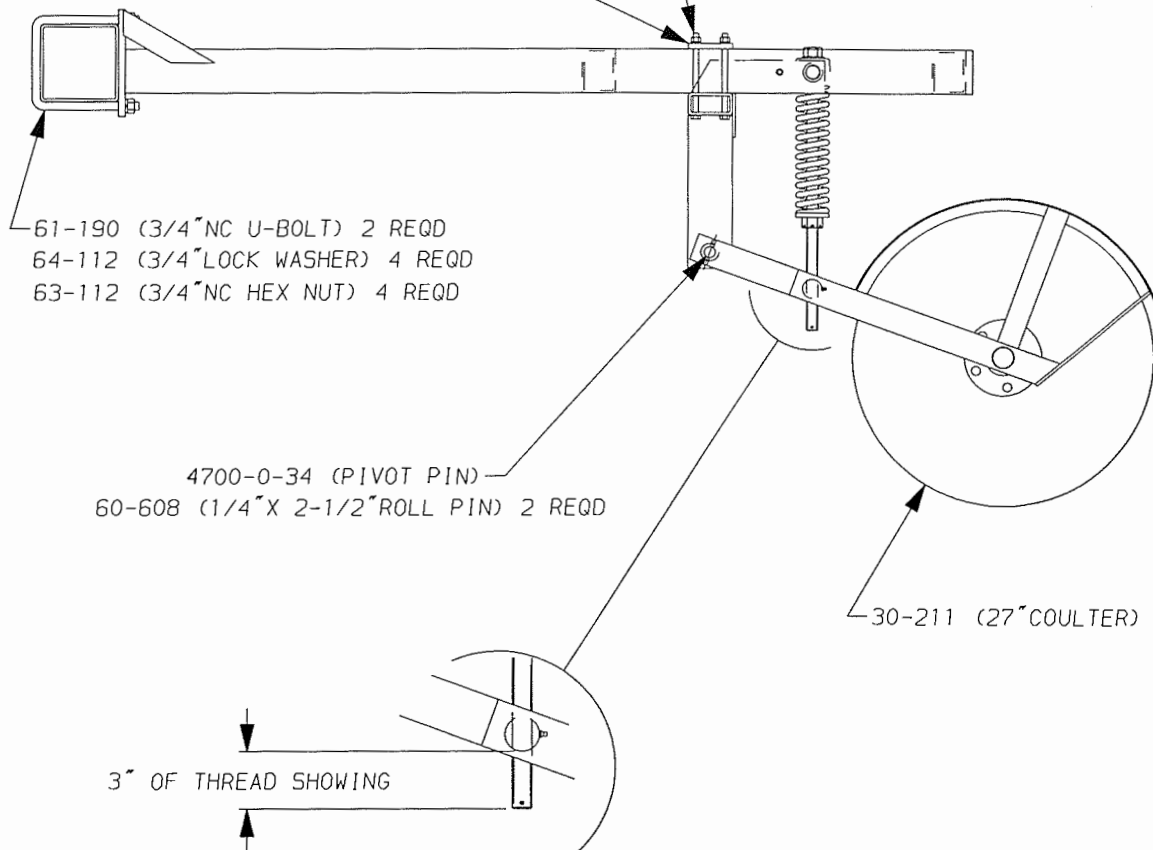
NOTE: There are (2) Blades on each of the half row gangs also.

# X. REAR STABILIZER -- ACCESSORY

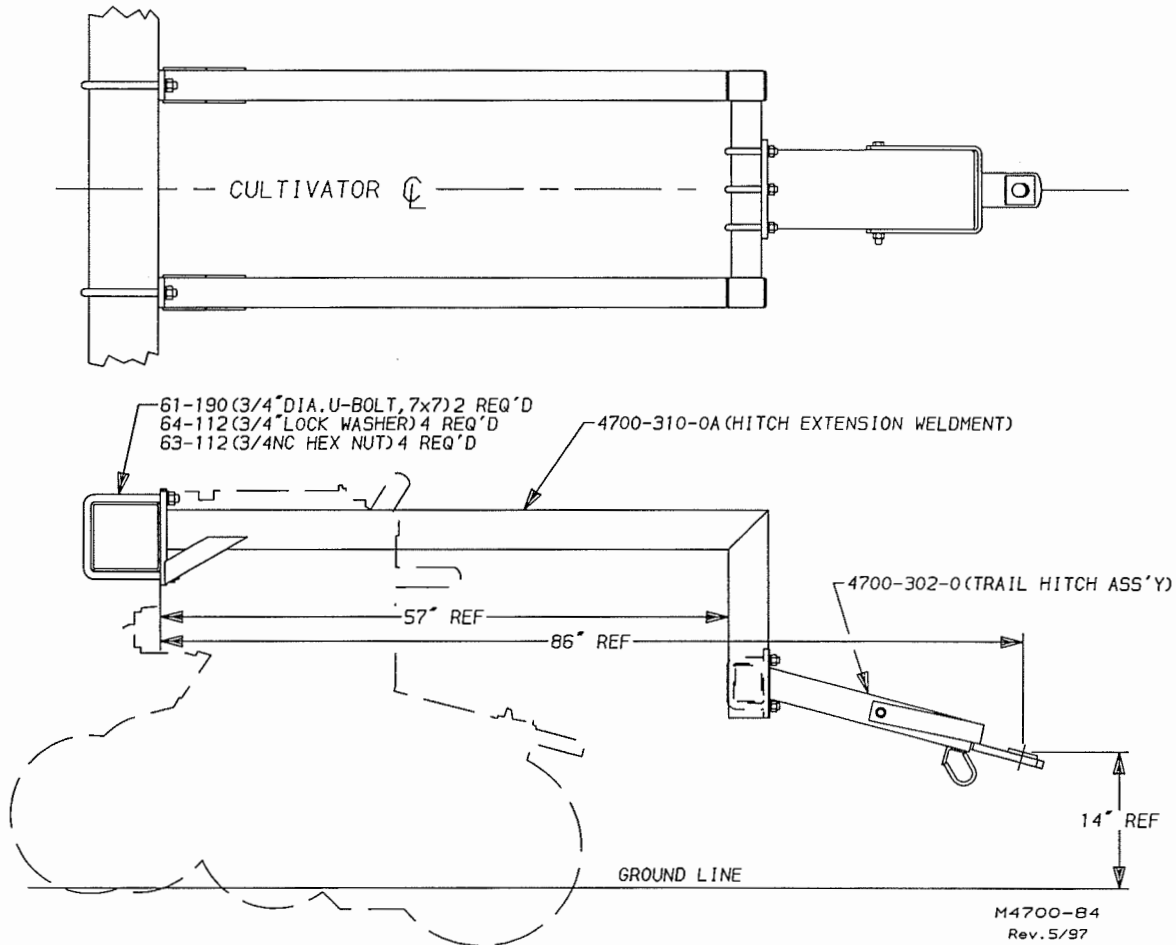


- 62-162 (1/2"NC x 7-1/2" GDS CAP SCREW) 8 REQD
- 64-108 (1/2" FLAT WASHER) 8 REQD
- 64-107 (1/2" LOCK WASHER) 8 REQD
- 63-106 (1/2"NC HEX NUT) 8 REQD

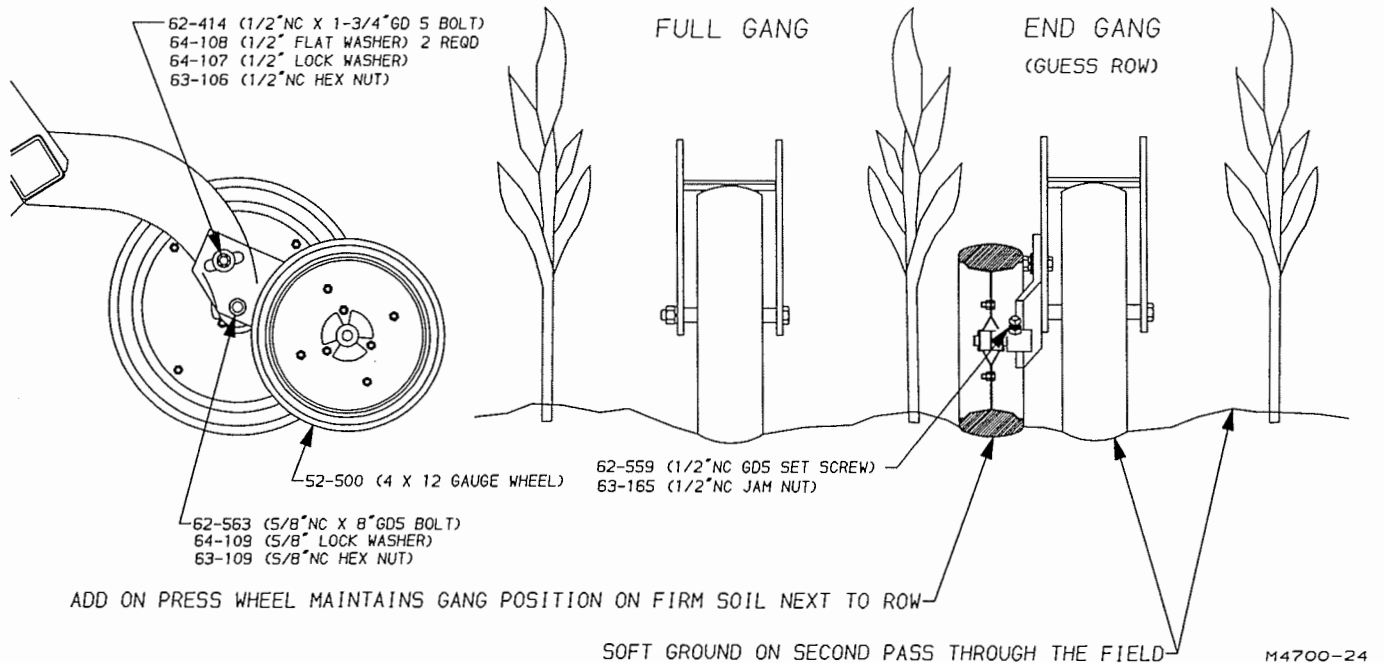
- 4700-0-33 (BOLT PLATE) 2 REQD



## XI. TRAIL HITCH -- ACCESSORY



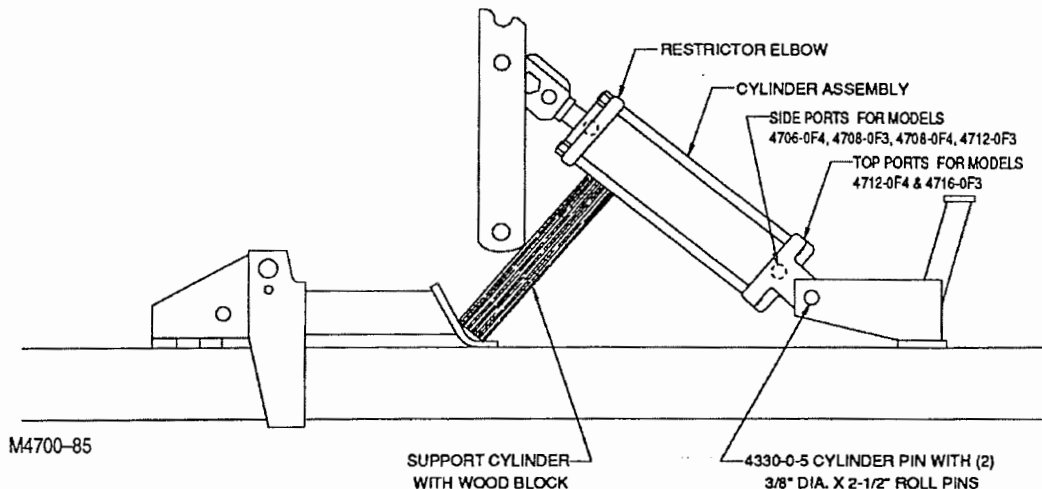
## XII. OFFSET WHEEL GROUP - ACCESSORY



**ADJUSTMENT:** Set the 4 x 12 Gauge Wheel on the first pass through the field. Adjust the wheel so that it touches the ground but is not carrying any weight. Tighten the bolts in this position. On the second pass, when the 4 x 16 Gauge Wheel is in loose soil, the 4 x 12 wheel will be carrying the gang weight.

### XIII. HYDRAULICS (WING MODELS ONLY)

1. Attach the base end of the wing lift cylinder with Cylinder Pins (4330-0-5) and secure them in place with 3/8" DIA. x 2-1/2" Roll Pins. Support the cylinders on wood blocks as shown in the illustration below. Make sure that the rod end arm is high enough to clear the hinge.



2. Refer to the Parts Section Page P31 and P32 for proper assembly of hydraulic hoses and fittings.

**IMPORTANT:** MAKE SURE THE RESTRICTOR ELLS ARE ASSEMBLED INTO ALL CYLINDER PORTS.

**Warning:** Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.

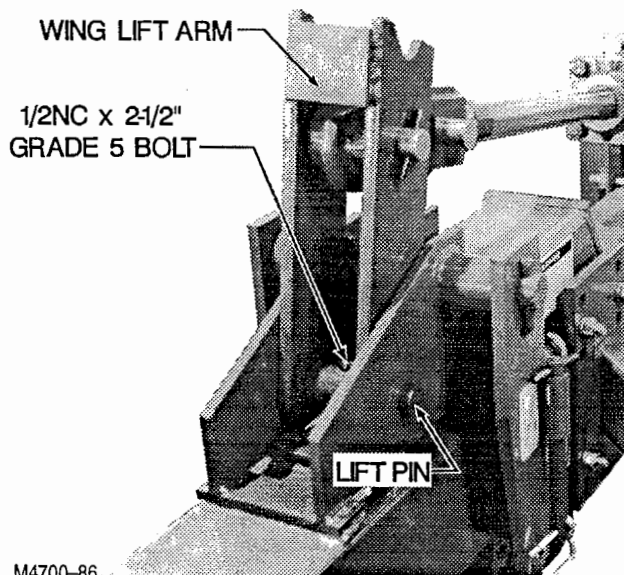


3. Attach couplers to the tractor and start filling the hydraulic system. After the cylinders are completely extended, hold the valve open for a few seconds, forcing any air out and oil in. Run the cylinders through their complete cycles several times. When you are sure the system is full of oil, extend the rods and use cardboard or paper to check for any leaks in the hose connections.

**NEVER USE YOUR BARE HANDS;**  
**SEE WARNING ABOVE.**

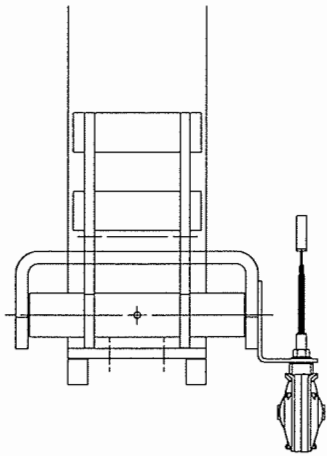
**MODELS:** 4706F4, 4708F3, 4708F4,  
4736 F4, 4738F3, 4738F4.

4. Fasten the Wing Lift Arm to the wing with a Wing Lift Pin (4600-0-26). Retain the Wing Lift Pin in place with a 1/2NC x 2-1/2" GRADE 5 Cap Screw and Self Locking Nut. See the photograph to the right.



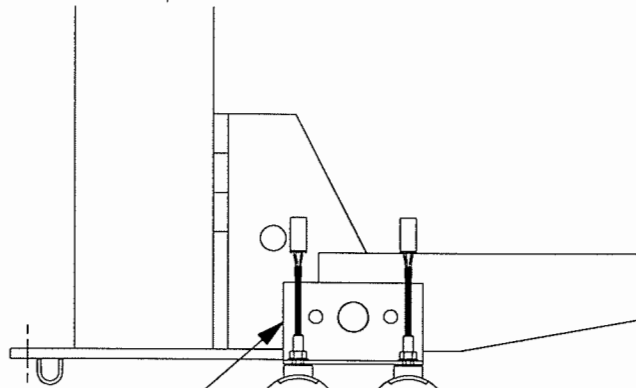
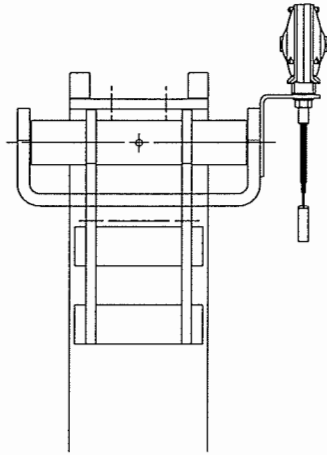
M4700-86

4700  
LEFT HINGE



TOP VIEW

4700  
RIGHT HINGE

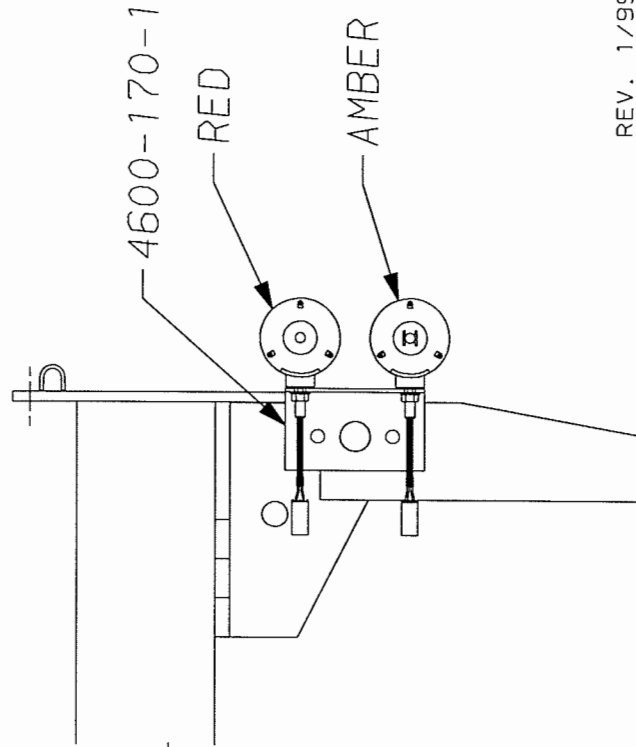


4600-170-1

RED

AMBER

REAR VIEW



4600-170-1

RED

AMBER

REV. 1/99

4612-170-1